



OWNER'S MANUAL

YBR250

5D1-F8199-E0

Welcome to the Yamaha world of motorcycling!

As the owner of the YBR250, you are benefiting from Yamaha's vast experience and newest technology regarding the design and manufacture of high-quality products, which have earned Yamaha a reputation for dependability.

Please take the time to read this manual thoroughly, so as to enjoy all advantages of your YBR250. The owner's manual does not only instruct you in how to operate, inspect and maintain your motorcycle, but also in how to safeguard yourself and others from trouble and injury.



In addition, the many tips given in this manual will help keep your motorcycle in the best possible condition. If you have any further questions, do not hesitate to contact your Yamaha dealer.

The Yamaha team wishes you many safe and pleasant rides. So, remember to put safety first!

IMPORTANT MANUAL INFORMATION

EAU10151

Particularly important information is distinguished in this manual by the following notations:

	The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!
 WARNING	Failure to follow WARNING instructions could result in severe injury or death to the motorcycle operator, a bystander, or a person inspecting or repairing the motorcycle.
CAUTION:	A CAUTION indicates special precautions that must be taken to avoid damage to the motorcycle.
NOTE:	A NOTE provides key information to make procedures easier or clearer.

NOTE: _____

- This manual should be considered a permanent part of this motorcycle and should remain with it even if the motorcycle is subsequently sold.
- Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your motorcycle and this manual. If you have any questions concerning this manual, please consult your Yamaha dealer.

EWA10030

 **WARNING** _____
PLEASE READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE OPERATING THIS MOTORCYCLE.

*Product and specifications are subject to change without notice.

IMPORTANT MANUAL INFORMATION

EAUW0010

**YBR250
OWNER'S MANUAL
© 2007 by Yamaha Motor da Amazônia Ltda
1st edition, January 2007
All rights reserved
Any reprinting or unauthorized use
without the written permission of
Yamaha Motor da Amazônia Ltda
is expressly prohibited.
Printed in Brazil.**

TABLE OF CONTENTES

SAFETY INFORMATION 1-1

DESCRIPTION 2-1

Left view	2-1
Right view	2-2
Controls and instruments	2-3

INSTRUMENT AND CONTROL

FUNCTIONS 3-1

Main switch/steering lock	3-1
Indicator and warning lights	3-2
Speedometer	3-2
Tachometer	3-3
Multi-function display	3-3
Handlebar switches	3-4
Clutch lever	3-5
Shift pedal	3-6
Brake lever	3-6
Brake pedal	3-6
Fuel tank cap	3-7
Fuel	3-7
Catalytic converter	3-8
Seat	3-9
Helmet holder	3-9
Storage compartment	3-10
Adjusting the shock absorber assemblies	3-10
Luggage strap holders	3-11
Sidestand	3-11
Ignition circuit cut-off system	3-12

PRE-OPERATION CHECKS 4-1

Pre-operation check list	4-2
--------------------------------	-----

OPERATION AND IMPORTANT

RIDING POINTS 5-1

Starting the engine	5-1
Shifting	5-2
Tips for reducing fuel consumption	5-3
Engine break-in	5-3
Parking	5-4

PERIODIC MAINTENANCE AND

MINOR REPAIR 6-1

Owner's tool kit	6-1
Periodic maintenance and lubrication chart	6-2
Removing and installing the cowling and panels	6-6
Checking the spark plug	6-7
Engine oil and oil filter element ...	6-8
Cleaning the air filter element ...	6-11
Checking the engine idling speed	6-12
Checking the throttle cable free play	6-12
Valve clearance	6-12
Tires	6-13
Cast wheels	6-15
Adjusting the clutch lever free play	6-15

Adjusting the brake pedal position and free play	6-16
Adjusting the rear brake light switch	6-17
Checking the front brake pads and rear brake shoes	6-17
Checking the front brake fluid level	6-18
Changing the brake fluid	6-18
Drive chain slack	6-19
Cleaning and lubricating the drive chain	6-20
Checking and lubricating the cables	6-21
Checking and lubricating the throttle grip and cable	6-21
Checking and lubricating the brake and clutch levers	6-21
Checking and lubricating the brake and shift pedals	6-22
Checking and lubricating the sidestand	6-22
Lubricating the rear suspension	6-23
Checking the front fork	6-23
Checking the steering	6-24
Checking the wheel bearings	6-24
Battery	6-24
Replacing the fuses	6-26
Replacing the headlight bulb	6-27
Replacing a turn signal light bulb or the tail/brake light bulb	6-28

TABLE OF CONTENTES

Replacing the auxiliary light bulb	6-28
Supporting the motorcycle	6-29
Front wheel	6-29
Rear wheel	6-30
Troubleshooting	6-31
Troubleshooting chart	6-32

MOTORCYCLE CARE AND

STORAGE	7-1
Care	7-1
Storage	7-3

SPECIFICATIONS	8-1
-----------------------------	------------

CONSUMER INFORMATION	9-1
-----------------------------------	------------

Identification numbers	9-1
Vehicle identification number	9-1
Model label	9-1

SAFETY INFORMATION

EAU10281

MOTORCYCLES ARE SINGLE TRACK VEHICLES. THEIR SAFE USE AND OPERATION ARE DEPENDENT UPON THE USE OF PROPER RIDING TECHNIQUES AS WELL AS THE EXPERTISE OF THE OPERATOR. EVERY OPERATOR SHOULD KNOW THE FOLLOWING REQUIREMENTS BEFORE RIDING THIS MOTORCYCLE. HE OR SHE SHOULD:

- OBTAIN THOROUGH INSTRUCTIONS FROM A COMPETENT SOURCE ON ALL ASPECTS OF MOTORCYCLE OPERATION.
- OBSERVE THE WARNINGS AND MAINTENANCE REQUIREMENTS IN THE OWNER'S MANUAL.
- OBTAIN QUALIFIED TRAINING IN SAFE AND PROPER RIDING TECHNIQUES.
- OBTAIN PROFESSIONAL TECHNICAL SERVICE AS INDICATED BY THE OWNER'S MANUAL AND/OR WHEN MADE NECESSARY BY MECHANICAL CONDITIONS.

Safe riding

- Always make pre-operation checks. Careful checks may help prevent an accident.
- This motorcycle is designed to carry the operator and a passenger.
- The failure of motorists to detect and recognize motorcycles in traffic is the predominating cause of automobile/motorcycle accidents. Many accidents have been caused by an automobile driver who did not see the motorcycle. Making yourself conspicuous appears to be very effective in reducing the chance of this type of accident.

Therefore:

- Wear a brightly colored jacket.
- Use extra caution when you are approaching and passing through intersections, since intersections are the most likely places for motorcycle accidents to occur.
- Ride where other motorists can see you. Avoid riding in another motorist's blind spot.
- Many accidents involve inexperienced operators. In fact,

many operators who have been involved in accidents do not even have a current motorcycle license.

- Make sure that you are qualified and that you only lend your motorcycle to other qualified operators.
- Know your skills and limits. Staying within your limits may help you to avoid an accident.
- We recommend that you practice riding your motorcycle where there is no traffic until you have become thoroughly familiar with the motorcycle and all of its controls.
- Many accidents have been caused by error of the motorcycle operator. A typical error made by the operator is veering wide on a turn due to EXCESSIVE SPEED or undercornering (insufficient lean angle for the speed).
- Always obey the speed limit and never travel faster than warranted by road and traffic conditions.
- Always signal before turning or changing lanes. Make sure that other motorists can see you.

- The posture of the operator and passenger is important for proper control.
 - The operator should keep both hands on the handlebar and both feet on the operator footrests during operation to maintain control of the motorcycle.
 - The passenger should always hold onto the operator, the seat strap or grab bar, if equipped, with both hands and keep both feet on the passenger footrests.
 - Never carry a passenger unless he or she can firmly place both feet on the passenger footrests.
 - Never ride under the influence of alcohol or other drugs.
 - This motorcycle is designed for on-road use only. It is not suitable for off-road use.

Protective apparel

The majority of fatalities from motorcycle accidents are the result of head injuries. The use of a safety helmet is the single most critical factor in the prevention or reduction of head injuries.

- Always wear an approved helmet.

- Wear a face shield or goggles. Wind in your unprotected eyes could contribute to an impairment of vision that could delay seeing a hazard.
- The use of a jacket, heavy boots, trousers, gloves, etc., is effective in preventing or reducing abrasions or lacerations.
- Never wear loose-fitting clothes, otherwise they could catch on the control levers, footrests, or wheels and cause injury or an accident.
- Never touch the engine or exhaust system during or after operation. They become very hot and can cause burns. Always wear protective clothing that covers your legs, ankles, and feet.
- A passenger should also observe the above precautions.

Modifications

Modifications made to this motorcycle not approved by Yamaha, or the removal of original equipment, may render the motorcycle unsafe for use and may cause severe personal injury. Modifications may also make your

motorcycle illegal to use.

Loading and accessories

Adding accessories or cargo to your motorcycle can adversely affect stability and handling if the weight distribution of the motorcycle is changed. To avoid the possibility of an accident, use extreme caution when adding cargo or accessories to your motorcycle. Use extra care when riding a motorcycle that has added cargo or accessories. Here are some general guidelines to follow if loading cargo or adding accessories to your motorcycle:

Loading

The total weight of the operator, passenger, accessories and cargo must not exceed the maximum load limit.

Maximum load:
167 kg (368 lb)

When loading within this weight limit, keep the following in mind:

- Cargo and accessory weight should be kept as low and close to the motorcycle as possible. Make sure to distribute the weight as evenly

SAFETY INFORMATION

1

as possible on both sides of the motorcycle to minimize imbalance or instability.

- Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the motorcycle before riding. Check accessory mounts and cargo restraints frequently.
- Never attach any large or heavy items to the handlebar, front fork, or front fender. These items, including such cargo as sleeping bags, duffel bags, or tents, can create unstable handling or a slow steering response.

Accessories

Genuine Yamaha accessories have been specifically designed for use on this motorcycle. Since Yamaha cannot test all other accessories that may be available, you must personally be responsible for the proper selection, installation and use of non-Yamaha accessories. Use extreme caution when selecting and installing any accessories. Keep the following guidelines in mind, as well as those provided under

“Loading” when mounting accessories.

- Never install accessories or carry cargo that would impair the performance of your motorcycle. Carefully inspect the accessory before using it to make sure that it does not in any way reduce ground clearance or cornering clearance, limit suspension travel, steering travel or control operation, or obscure lights or reflectors.
- Accessories fitted to the handlebar or the front fork area can create instability due to improper weight distribution or aerodynamic changes. If accessories are added to the handlebar or front fork area, they must be as lightweight as possible and should be kept to a minimum.
- Bulky or large accessories may seriously affect the stability of the motorcycle due to aerodynamic effects. Wind may attempt to lift the motorcycle, or the motorcycle may become unstable in cross winds. These accessories may also cause instability when

passing or being passed by large vehicles.

- Certain accessories can displace the operator from his or her normal riding position. This improper position limits the freedom of movement of the operator and may limit control ability, therefore, such accessories are not recommended.
- Use caution when adding electrical accessories. If electrical accessories exceed the capacity of the motorcycle’s electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.

Gasoline and exhaust gas

- **GASOLINE IS HIGHLY FLAMMABLE:**
 - Always turn the engine off when refueling.
 - Take care not to spill any gasoline on the engine or exhaust system when refueling.
 - Never refuel while smoking or in the vicinity of an open flame.

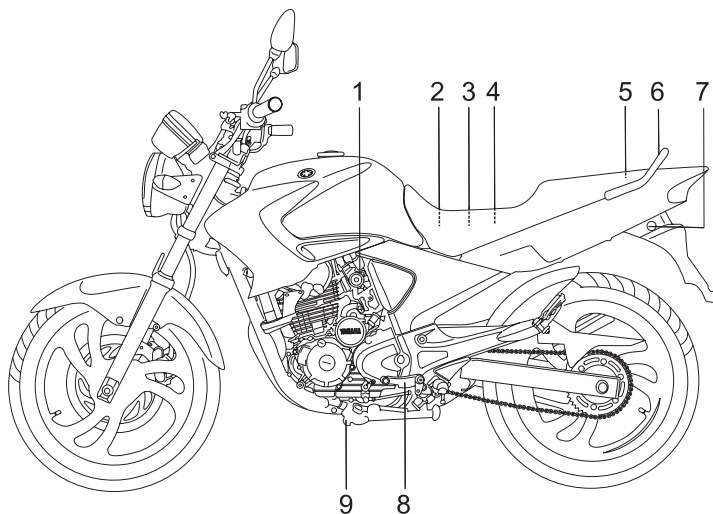
- Never start the engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and may cause loss of consciousness and death within a short time. Always operate your motorcycle in an area that has adequate ventilation.
- Always turn the engine off before leaving the motorcycle unattended and remove the key from the main switch. When parking the motorcycle, note the following:
 - The engine and exhaust system may be hot, therefore, park the motorcycle in a place where pedestrians or children are not likely to touch these hot areas.
 - Do not park the motorcycle on a slope or soft ground, otherwise it may fall over.
 - Do not park the motorcycle near a flammable source, (e.g., a kerosene heater, or near an open flame), otherwise it could catch fire.
- When transporting the motorcycle in another vehicle, make sure that it is kept upright. If the motorcycle should lean over, gasoline may leak out of the fuel tank.
- If you should swallow any gasoline, inhale a lot of gasoline vapor, or allow gasoline to get into your eyes, see your doctor immediately. If any gasoline spills on your skin or clothing, immediately wash the affected area with soap and water and change your clothes.

DESCRIPTION

EAU10410

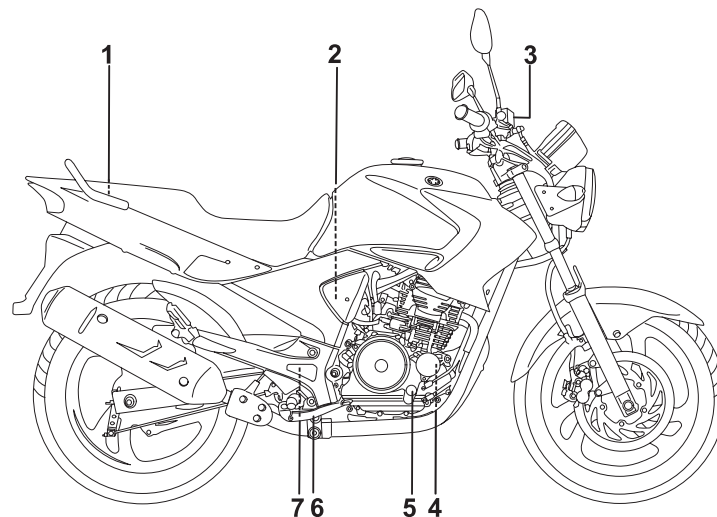
Left view

2



1. Idle adjusting screw
2. Battery
3. Main fuse
4. Fuse box
5. Storage compartment
6. Grab bar
7. Seat lock
8. Shift pedal
9. Engine oil drain bolt

Right view



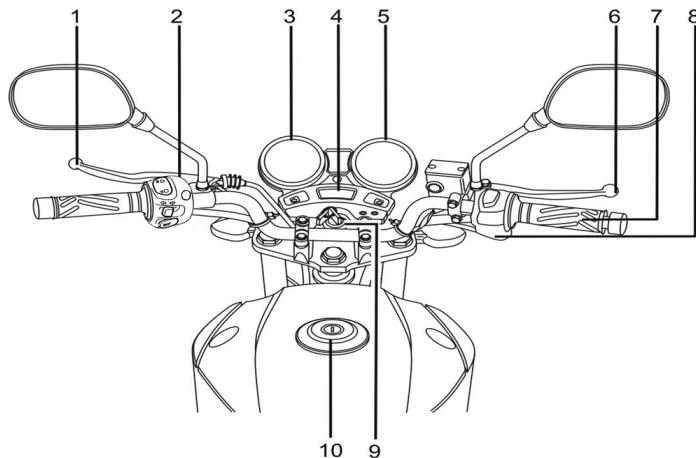
1. Owner's tool kit
2. Air filter element
3. Front brake fluid reservoir
4. Engine oil filter element
5. Engine oil filler cap
6. Brake pedal
7. Shock absorber assembly spring preload adjusting ring

DESCRIPTION

EAU10430

Controls and instruments

2

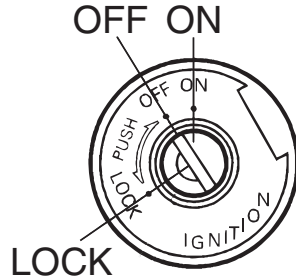


1. Clutch lever
2. Left handlebar switches
3. Speedometer
4. Display
5. Tachometer
6. Front brake lever
7. Throttle grip
8. Right handlebar switches
9. Main switch
10. Fuel tank cap

INSTRUMENT AND CONTROL FUNCTIONS

Main switch/steering lock

The main switch/steering lock controls the ignition and lighting systems, and is used to lock the steering. The various positions are described below.



ON

All electrical circuits are supplied with power; the meter lighting, taillight and auxiliary light come on, and the engine can be started. The key cannot be removed.

NOTE:

The headlight comes on automatically when the engine is started and stays on until the key is turned to "OFF"

EAU10460

OFF

All electrical systems are off. The key can be removed.

EAU10660

LOCK

The steering is locked, and all electrical systems are off. The key can be removed.

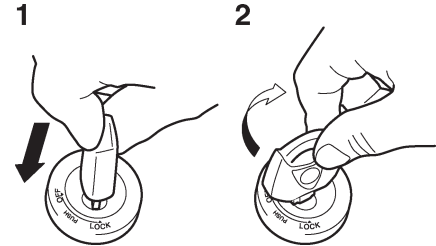
EAU10680

To lock the steering

1. Turn the handlebars all the way to the left.
2. Push the key in from the "OFF" position, and then turn it to "LOCK" while still pushing it.
3. Remove the key.

To unlock the steering

Push the key in, and then turn it to "OFF" while still pushing it.

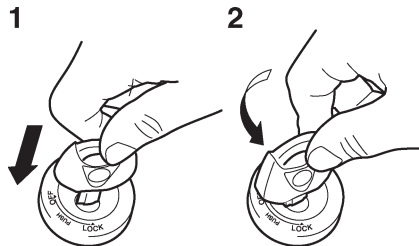


1. Push
2. Turn

EWA10060

⚠ WARNING

Never turn the key to "OFF" or "LOCK" while the vehicle is moving, otherwise the electrical systems will be switched off, which may result in loss of control or an accident. Make sure that the vehicle is stopped before turning the key to "OFF" or "LOCK".

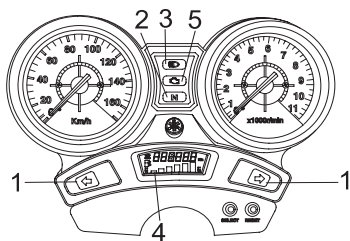


1. Push
2. Turn

INSTRUMENT AND CONTROL FUNCTIONS

Indicator and warning lights

EAU11003



1. Turn signal indicator light “ \triangleleft / \triangleright ”
2. Neutral indicator light “N”
3. High beam indicator light “ $\equiv D$ ”
4. Fuel level warning light “ fuel ”
5. Engine trouble warning light “ engine ”

Turn signal indicator lights “ \triangleleft ” and “ \triangleright ”

The corresponding indicator light flashes when the turn signal switch is pushed to the left or right.

Neutral indicator light “N”

EAU11060

This indicator light comes on when the transmission is in the neutral position.

High beam indicator light “ $\equiv D$ ”

This indicator light comes on when the high beam of the headlight is switched on.

EAU11080

Fuel level warning light “ fuel ”

EAU11350

This warning light comes on when the fuel level drops below approximately 4.5 L (1.19 US gal) (1.00 Imp. gal). When this occurs, refuel as soon as possible. The electrical circuit of the warning light can be checked by turning the key to “ON”.

If the warning light does not come on for a few seconds, then go off, have a Yamaha dealer check the electrical circuit.

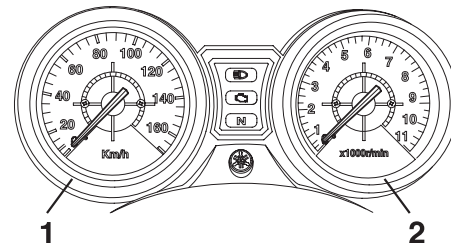
Engine trouble warning light “ engine ”

EAU11470

This warning light comes on or flashes when an electrical circuit monitoring the engine is defective. When this occurs, have a Yamaha dealer check the self-diagnosis system.

Speedometer

EAU11601



1. Speedometer
2. Tachometer

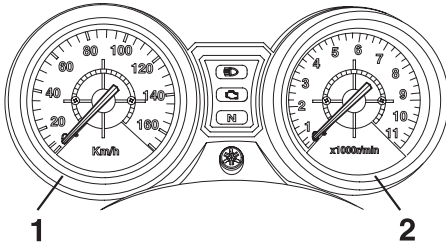
The speedometer shows the riding speed.

When the key is turned to “ON”, the speedometer needle will sweep once across the speed range and then return to zero in order to test the electrical circuit.

EAU11872

EAUW0150

Tachometer



1. Speedometer
2. Tachometer

The electric tachometer allows the rider to monitor the engine speed and keep it within the ideal power range. When the key is turned to “ON”, the tachometer needle will sweep once across the r/min range and then return to zero r/min in order to test the electrical circuit.

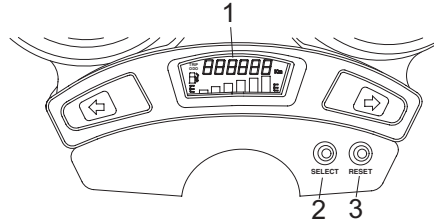
ECA10031

CAUTION:

Do not operate the engine in the tachometer red zone.

Red zone: 10.000 r/min and above

Multi-function display



1. Display
2. “SELECT” button
3. “RESET” button

The multi-function display is equipped with the following:

- an odometer (which shows the total distance traveled)
- two tripmeters (which show the distance traveled since they were last set to zero)
- a fuel reserve tripmeter (which shows the distance traveled on the fuel reserve)
- a fuel meter
- a clock

NOTE:

Be sure to turn the key to “ON” before using the “SELECT” and “RESET” buttons.

Odometer, tripmeter and clock modes

Pushing the “SELECT” button switches the display between the odometer mode “ODO” and the tripmeter modes “TRIP 1”, “TRIP 2” and the clock mode in the following order:

ODO → TRIP 1 → TRIP 2 → CLOCK → ODO

If the fuel level warning light comes on (see page 3-2), the odometer display will automatically change to the fuel reserve tripmeter mode “F-TRIP” and start counting the distance traveled from that point. In that case, pushing the “SELECT” button switches the display between the various tripmeter, odometer and clock modes in the following order: F-TRIP → TRIP 1 → TRIP 2 → CLOCK → ODO → F-TRIP

To reset a tripmeter, select it by pushing

INSTRUMENT AND CONTROL FUNCTIONS

the “SELECT” button, and then push the “RESET” button for at least one second. If you do not reset the fuel reserve tripmeter manually, it will reset itself automatically and the display will return to the prior mode after refueling and traveling 5 km (3mi).

Clock mode

To set the clock:

1. Push the “SELECT” button and “RESET” button together for at least two seconds.
2. When the hour digits start flashing, push the “RESET” button to set the hours.
3. Push the “SELECT” button, and the minute digits will start flashing.
4. Push the “RESET” button to set the minutes.
5. Push the “SELECT” button and then release it to start the clock.

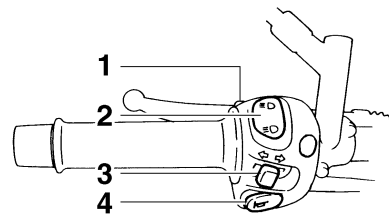
Fuel meter

With the key in the “ON” position, the fuel meter indicates the amount of fuel in the fuel tank. The display segments of the fuel meter disappear towards “E” (Empty) as the fuel level decreases.

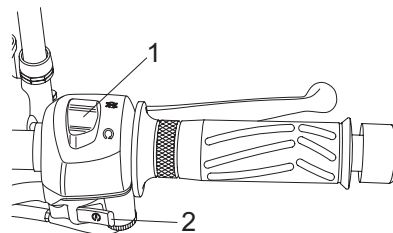
When the fuel level reaches the bottom segment near “E”, the fuel level warning indicator and the bottom segment will flash. Refuel as soon as possible.

Handlebar switches

EAU12347



1. Pass switch “ ”
2. Dimmer switch “ / ”
3. Turn signal switch “ / ”
4. Horn switch “ ”



1. Engine stop switch “ ”
2. Start switch “ ”



Pass switch “ ”

EAU12350

Press this switch to flash the headlight.



Dimmer switch “ ”

EAU12400

Set this switch to “ ” for the high beam and to “ ” for the low beam.

Turn signal switch “ / ”

EAU12460

To signal a right-hand turn, push this switch to “ ”. To signal a left-hand turn, push this switch to “ ”. When released, the switch returns to the center position. To cancel the turn signal lights, push the switch in after it has returned to the center position.



Horn switch “ ”

EAU12500

Press this switch to sound the horn.

Engine stop switch “ ”

EAU12660

Set this switch to “ ” before starting the engine. Set this switch to “ ” to stop the engine in case of an emergency, such as when the motorcycle overturns or when the throttle cable is stuck.

Start switch “ ”

EAU12710

Push this switch to crank the engine with the starter.

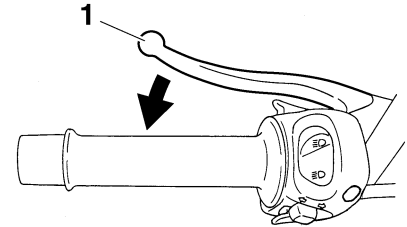
CAUTION:

See page 5-1 for starting instructions prior to starting the engine.

ECA10050

Clutch lever

EAU12820



1. Clutch lever

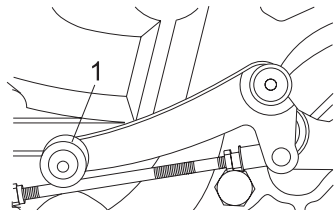
The clutch lever is located at the left handlebar grip. To disengage the clutch, pull the lever toward the handlebar grip. To engage the clutch, release the lever. The lever should be pulled rapidly and released slowly for smooth clutch operation.

The clutch lever is equipped with a clutch switch, which is part of the ignition circuit cut-off system. (See page 3-12.)

INSTRUMENT AND CONTROL FUNCTIONS

Shift pedal

EAU12870

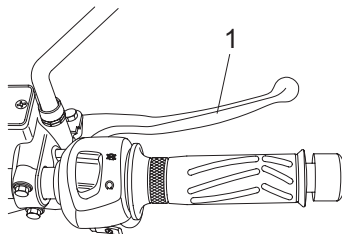


1. Shift pedal

The shift pedal is located on the left side of the engine and is used in combination with the clutch lever when shifting the gears of the 5-speed constant-mesh transmission equipped on this motorcycle.

Brake lever

EAU12890

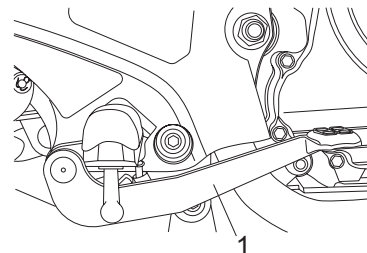


1. Front brake lever

The brake lever is located at the right handlebar grip. To apply the front brake, pull the lever toward the handlebar grip.

Brake pedal

EAU12941



1. Brake pedal

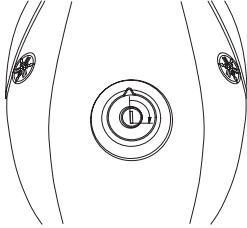
The brake pedal is on the right side of the motorcycle. To apply the rear brake, press down on the brake pedal.

INSTRUMENT AND CONTROL FUNCTIONS

Fuel tank cap

EAU13021

the key cannot be removed if the cap is not properly installed and locked.



To remove the fuel tank cap

Insert the key into the lock and turn it 1/4 turn clockwise. The lock will be released and the fuel tank cap can be removed.

To install the fuel tank cap

1. Insert the fuel tank cap into the tank opening with the key inserted in the lock and with the “▲” mark facing forward.
2. Turn the key counterclockwise to the original position, and then remove it.

NOTE:

The fuel tank cap cannot be installed unless the key is in the lock. In addition,

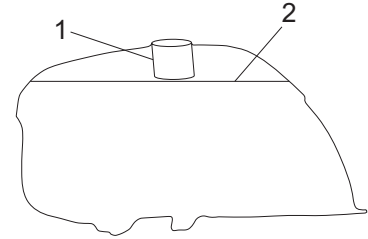
EWA10130

! WARNING

Make sure that the fuel tank cap is properly installed before riding.

Fuel

EAU13211



1. Fuel tank filler tube
2. Fuel level

Make sure that there is sufficient fuel in the tank. Fill the fuel tank to the bottom of the filler tube as shown.

EWA10880

! WARNING

- Do not overfill the fuel tank, otherwise it may overflow when the fuel warms up and expands.
- Avoid spilling fuel on the hot engine.

INSTRUMENT AND CONTROL FUNCTIONS

3

ECA10070

CAUTION:

Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.

EAU33500

Recommended fuel:

REGULAR UNLEADED
GASOLINE ONLY

Fuel tank capacity:

19.2 L (5.07 US gal) (4.22 Imp.
gal)

Fuel reserve amount (when the fuel
level warning light comes on):

4.5 L (1.19 US gal) (1.00 Imp. gal)

ECA11400

CAUTION:

Use only unleaded gasoline. The use of leaded gasoline will cause severe damage to internal engine parts, such as the valves and piston rings, as well as to the exhaust system.

Your Yamaha engine has been designed to use regular unleaded gasoline with a research octane number of 91 or higher. If knocking (or pinging) occurs, use a

gasoline of a different brand. Use of unleaded fuel will extend spark plug life and reduce maintenance costs.

EAU13431

Catalytic converter

This model is equipped with a catalytic converter in the exhaust system.

EWA10860

⚠ WARNING

The exhaust system is hot after operation. Make sure that the exhaust system has cooled down before doing any maintenance work.

ECA10700

CAUTION:

The following precautions must be observed to prevent a fire hazard or other damages.

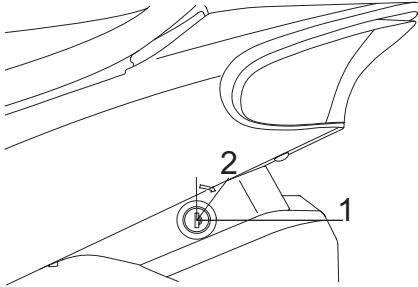
- **Use only unleaded gasoline. The use of leaded gasoline will cause unrepairable damage to the catalytic converter.**
- **Never park the vehicle near possible fire hazards such as grass or other materials that easily burn.**
- **Do not allow the engine to idle too long.**

EAU13800

Seat

To remove the seat

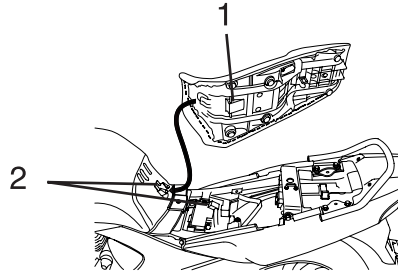
1. Insert the key into the seat lock, and then turn it clockwise.
2. Pull the seat off.



1. Seat lock
2. Unlock

To install the seat

1. Insert the projections on the front of the seat into the seat holders as shown.



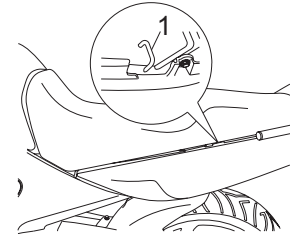
1. Projection
2. Seat holder

2. Push the rear of the seat down to lock it in place.
3. Remove the key.

NOTE: _____
Make sure that the seat is properly secured before riding.

EAU14300

Helmet holder



1. Helmet holder

The helmet holder is located under the seat.

To secure a helmet to the helmet holder

1. Open the seat. (See page 3-9.)
2. Attach the helmet to the helmet holder, and then securely close the seat.

EWA10160

⚠ WARNING

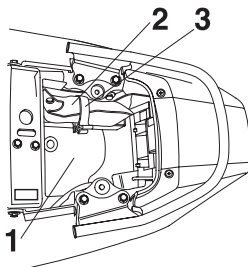
Never ride with a helmet attached to the helmet holder, since the helmet may hit objects, causing loss of control and possibly an accident.

INSTRUMENT AND CONTROL FUNCTIONS

To release the helmet from the helmet holder

Open the seat, remove the helmet from the helmet holder, and then close the seat.

Storage compartment



1. Storage compartment
2. Owner's tool kit
3. Band

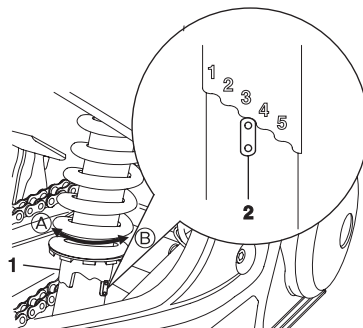
The storage compartment is located under the seat. (See page 3-9.)

When storing the owner's manual or other documents in the storage compartment, be sure to wrap them in a plastic bag so that they will not get wet. When washing the vehicle, be careful not to let any water enter the storage compartment.

EAU37890

Adjusting the shock absorber assemblies

EAU14880



1. Spring preload adjusting ring
2. Position indicator

Each shock absorber assembly is equipped with a spring preload adjusting ring.

ECA10100

CAUTION:

Never attempt to turn an adjusting mechanism beyond the maximum or minimum settings.

EWA10210

EAU36700

EAU15301

⚠ WARNING

Always adjust both shock absorber assemblies equally, otherwise poor handling and loss of stability may result.

To increase the spring preload and thereby harden the suspension, turn the adjusting ring on each shock absorber assembly in direction (a). To decrease the spring preload and thereby soften the suspension, turn the adjusting ring on each shock absorber assembly in direction (b).

NOTE:

Align the appropriate notch in the adjusting ring with the position indicator on the shock absorber.

Spring preload setting:

Minimum (soft):

1

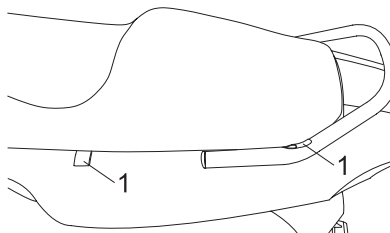
Standard:

3

Maximum (hard):

5

Luggage strap holders



1. Luggage strap holder

There are four luggage strap holders on the bottom of the seat. To use the strap holders, remove the seat, unhook the straps from the hooks, and then install the seat with the straps hanging out from under the seat. (See page 3-9.)

Sidestand

The sidestand is located on the left side of the frame. Raise the sidestand or lower it with your foot while holding the motorcycle upright.

NOTE:

The built-in sidestand switch is part of the ignition circuit cut-off system, which cuts the ignition in certain situations. (See further down for an explanation of the ignition circuit cut-off system.)

EWA10240

⚠ WARNING

The vehicle must not be ridden with the sidestand down, or if the sidestand cannot be properly moved up (or does not stay up), otherwise the sidestand could contact the ground and distract the operator, resulting in a possible loss of control. Yamaha's ignition circuit cut-off system has been designed to assist the operator in fulfilling the responsibility of raising the sidestand before starting off. Therefore, check this system regularly as described

INSTRUMENT AND CONTROL FUNCTIONS

below and have a Yamaha dealer repair it if it does not function properly.

EAU15311

Ignition circuit cut-off system

The ignition circuit cut-off system (comprising the sidestand switch, clutch switch and neutral switch) has the following functions.

- It prevents starting when the transmission is in gear and the sidestand is up, but the clutch lever is not pulled.
- It prevents starting when the transmission is in gear and the clutch lever is pulled, but the sidestand is still down.
- It cuts the running engine when the transmission is in gear and the sidestand is moved down.

Periodically check the operation of the ignition circuit cut-off system according to the following procedure.

EWA10250



WARNING

If a malfunction is noted, have a Yamaha dealer check the system before riding.

INSTRUMENT AND CONTROL FUNCTIONS

With the engine turned off:

1. Move the sidestand down.
2. Make sure that the engine stop switch is turned on.
3. Turn the key on.
4. Shift the transmission into the neutral position.
5. Push the start switch.

Does the engine start?

YES

NO

NOTE: _____

This check is most reliable if performed with a warmed-up engine.

The neutral switch may be defective.

The motorcycle should not be ridden until checked by a Yamaha dealer.

With the engine still running:

6. Move the sidestand up.
7. Keep the clutch lever pulled.
8. Shift the transmission into gear.
9. Move the sidestand down.

Does the engine stall?

YES

NO

The sidestand switch may be defective.

The motorcycle should not be ridden until checked by a Yamaha dealer.

After the engine has stalled:

10. Move the sidestand up.
11. Keep the clutch lever pulled.
12. Push the start switch.

Does the engine start?

YES

NO

The clutch switch may be defective.

The motorcycle should not be ridden until checked by a Yamaha dealer.

The system is OK. **The motorcycle can be ridden.**

PRE-OPERATION CHECKS

EAU15592

The condition of a vehicle is the owner's responsibility. Vital components can start to deteriorate quickly and unexpectedly, even if the vehicle remains unused (for example, as a result of exposure to the elements). Any damage, fluid leakage or loss of tire air pressure could have serious consequences. Therefore, it is very important, in addition to a thorough visual inspection, to check the following points before each ride.

NOTE:

Pre-operation checks should be made each time the vehicle is used. Such an inspection can be accomplished in a very short time; and the added safety it assures is more than worth the time involved.

EWA11150

4

WARNING

If any item in the Pre-operation check list is not working properly, have it inspected and repaired before operating the vehicle.

Pre-operation check list

ITEM	CHECKS	PAGE
Fuel	<ul style="list-style-type: none">• Check fuel level in fuel tank.• Refuel if necessary.• Check fuel line for leakage.	3-7
Engine oil	<ul style="list-style-type: none">• Check oil level in engine.• If necessary, add recommended oil to specified level.• Check vehicle for oil leakage.	6-8~6-11
Front brake	<ul style="list-style-type: none">• Check operation.• If soft or spongy, have Yamaha dealer bleed hydraulic system.• Check brake pads for wear.• Replace if necessary.• Check fluid level in reservoir.• If necessary, add recommended brake fluid to specified level.• Check hydraulic system for leakage.	6-17~6-18
Rear brake	<ul style="list-style-type: none">• Check operation.• Check pedal free play.• Adjust if necessary.	6-16~6-17
Clutch	<ul style="list-style-type: none">• Check operation.• Lubricate cable if necessary.• Check lever free play.• Adjust if necessary.	6-15
Throttle grip	<ul style="list-style-type: none">• Make sure that operation is smooth.• Check cable free play.• If necessary, have Yamaha dealer adjust cable free play and lubricate cable and grip housing.	6-12 6-21
Control cables	<ul style="list-style-type: none">• Make sure that operation is smooth.• Lubricate if necessary.	6-21

PRE-OPERATION CHECKS

ITEM	CHECKS	PAGE
Drive chain	<ul style="list-style-type: none"> • Check chain slack. • Adjust if necessary. • Check chain condition. • Lubricate if necessary. 	6-19 ~ 6-20
Wheels and tires	<ul style="list-style-type: none"> • Check for damage. • Check tire condition and tread depth. • Check air pressure. • Correct if necessary. 	6-13 ~ 6-15 6-24
Brake and clutch levers	<ul style="list-style-type: none"> • Make sure that operation is smooth. • Lubricate lever pivoting points if necessary. 	6-21
Brake and shift pedals	<ul style="list-style-type: none"> • Make sure that operation is smooth. • Lubricate pedal pivoting points if necessary. 	6-22
Sidestand	<ul style="list-style-type: none"> • Make sure that operation is smooth. • Lubricate pivot if necessary. 	6-22
Chassis fasteners	<ul style="list-style-type: none"> • Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary. 	—
Instruments, lights, signals and switches	<ul style="list-style-type: none"> • Check operation. • Correct if necessary. 	6-26~6-28
Sidestand switch	<ul style="list-style-type: none"> • Check operation of ignition circuit cut-off system. • If system is defective, have Yamaha dealer check vehicle. 	3-12

OPERATION AND IMPORTANT RIDING POINTS

EAU15950

EWA10270

EAUW0090

EWA10290

ECAW0041

WARNING

- Become thoroughly familiar with all operating controls and their functions before riding. Consult a Yamaha dealer regarding any control or function that you do not thoroughly understand.
- Never start the engine or operate it in a closed area for any length of time. Exhaust fumes are poisonous, and inhaling them can cause loss of consciousness and death within a short time. Always make sure that there is adequate ventilation.
- Before starting out, make sure that the sidestand is up. If the sidestand is not raised completely, it could contact the ground and distract the operator, resulting in a possible loss of control.

Starting the engine

In order for the ignition circuit cut-off system to enable starting, one of the following conditions must be met:

- The transmission is in the neutral position.
- The transmission is in gear with the clutch lever pulled and the sidestand up.

WARNING

- Before starting the engine, check the function of the ignition circuit cut-off system according to the procedure described on page 3-12.
- Never ride with the sidestand down.

1. Turn the key to "ON" and make sure that the engine stop switch is set to "C".

CAUTION:

- The engine trouble warning light should come on for a few seconds, then go off. If the

warning light does not go off, ask a Yamaha dealer to check the motorcycle.

- The speedometer needle will sweep across the speed range and then return to zero. The tachometer needle will sweep across the r/min range and then return to zero. If either needle does not sweep across their ranges, ask a Yamaha dealer to check the motorcycle.

2. Shift the transmission into the neutral position.

NOTE:

When the transmission is in the neutral position, the neutral indicator light should be on, otherwise have a Yamaha dealer check the electrical circuit.

3. Start the engine by pushing the start switch.

NOTE:

If the engine fails to start, release the start switch, wait a few seconds, and then try again. Each starting attempt should be as short as possible to

OPERATION AND IMPORTANT RIDING POINTS

preserve the battery. Do not crank the engine more than 10 seconds on any one attempt.

ECA11040

CAUTION:

For maximum engine life, never accelerate hard when the engine is cold!

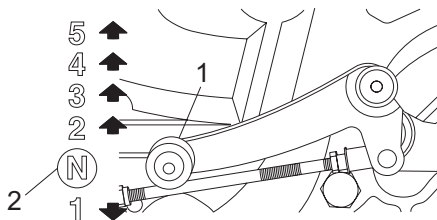
NOTE:

The engine is warm when it quickly responds to the throttle.

Shifting

Shifting gears lets you control the amount of engine power available for starting off, accelerating, climbing hills, etc.

The gear positions are shown in the illustration.



- 1. Shift pedal
- 2. Neutral position

NOTE:

To shift the transmission into the neutral position, press the shift pedal down repeatedly until it reaches the end of its travel, and then slightly raise it.

ECA10260

CAUTION:

- **Even with the transmission in the neutral position, do not coast for long periods of time with the**

engine off, and do not tow the motorcycle for long distances. The transmission is properly lubricated only when the engine is running. Inadequate lubrication may damage the transmission.

- **Always use the clutch while changing gears to avoid damaging the engine, transmission, and drive train, which are not designed to withstand the shock of forced shifting.**

OPERATION AND IMPORTANT RIDING POINTS

Tips for reducing fuel consumption

Fuel consumption depends largely on your riding style. Consider the following tips to reduce fuel consumption:

- Shift up swiftly, and avoid high engine speeds during acceleration.
- Do not rev the engine while shifting down, and avoid high engine speeds with no load on the engine.
- Turn the engine off instead of letting it idle for an extended length of time (e.g., in traffic jams, at traffic lights or at railroad crossings).

EAU16810

Engine break-in

There is never a more important period in the life of your engine than the period between 0 and 1600 km (1000 mi). For this reason, you should read the following material carefully. Since the engine is brand new, do not put an excessive load on it for the first 1600 km (1000 mi). The various parts in the engine wear and polish themselves to the correct operating clearances. During this period, prolonged full-throttle operation or any condition that might result in engine overheating must be avoided.

EAU16841

0-1000 km (0-600 mi)

Avoid prolonged operation above 5000 r/min.

EAU17100

1000-1600 km (600-1000 mi)

Avoid prolonged operation above 6000 r/min.

ECA11150

CAUTION:

After 1000 km (600 mi) of operation, the engine oil must be changed, and the oil filter element replaced.

1600 km (1000 mi) and beyond

The vehicle can now be operated normally.

ECA10310

CAUTION:

- **Keep the engine speed out of the tachometer red zone.**
- **If any engine trouble should occur during the engine break-in period, immediately have a Yamaha dealer check the vehicle.**

OPERATION AND IMPORTANT RIDING POINTS

EAU17212

Parking

When parking, stop the engine, and then remove the key from the main switch.

EWA10310

WARNING

- Since the engine and exhaust system can become very hot, park in a place where pedestrians or children are not likely to touch them.
- Do not park on a slope or on soft ground, otherwise the vehicle may overturn.

5

ECA10380

CAUTION:

Never park in an area where there are fire hazards such as grass or other flammable materials.

PERIODIC MAINTENANCE AND MINOR REPAIR

EAU17240

Safety is an obligation of the owner. Periodic inspection, adjustment and lubrication will keep your vehicle in the safest and most efficient condition possible. The most important points of inspection, adjustment, and lubrication are explained on the following pages. The intervals given in the periodic maintenance and lubrication chart should be simply considered as a general guide under normal riding conditions. However, **DEPENDING ON THE WEATHER, TERRAIN, GEOGRAPHICAL LOCATION, AND INDIVIDUAL USE, THE MAINTENANCE INTERVALS MAY NEED TO BE SHORTENED.**

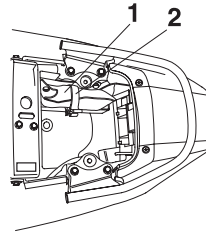
EWA10320

! WARNING

If you are not familiar with maintenance work, have a Yamaha dealer do it for you.

EAU17390

Owner's tool kit



- 1. Owner's tool kit
- 2. Band

The owner's tool kit is located under the seat. (See page 3-9.)

The service information included in this manual and the tools provided in the owner's tool kit are intended to assist you in the performance of preventive maintenance and minor repairs. However, additional tools such as a torque wrench may be necessary to perform certain maintenance work correctly.

NOTE:

If you do not have the tools or experience required for a particular job, have a Yamaha dealer perform it for you.

EWA10350

! WARNING

Modifications not approved by Yamaha may cause loss of performance and render the vehicle unsafe for use. Consult a Yamaha dealer before attempting any changes.

PERIODIC MAINTENANCE AND MINOR REPAIR

EAU17707

Periodic maintenance and lubrication chart

NOTE:

- The annual checks must be performed every year, except if a kilometer-based maintenance is performed instead.
- From 50000 km, repeat the maintenance intervals starting from 10000 km.
- Items marked with an asterisk should be performed by a Yamaha dealer as they require special tools, data and technical skills.

NO	ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING (x 1000 km)					ANNUAL CHECK
			1	10	20	30	40	
1	* Fuel line	• Check fuel hoses for cracks or damage.		✓	✓	✓	✓	✓
2	Spark plug	• Check condition. • Clean and regap.		✓		✓		
		• Replace.			✓		✓	
3	* Valves	• Check valve clearance. • Adjust.		✓	✓	✓	✓	
4	Air filter element	• Clean. • Replace if necessary.		✓	✓	✓	✓	
5	Clutch	• Check operation. • Adjust.	✓	✓	✓	✓	✓	
6	* Front brake	• Check operation, fluid level and vehicle for fluid leakage.	✓	✓	✓	✓	✓	✓
		• Replace brake pads.	Whenever worn to the limit					
7	* Rear brake	• Check operation and adjust brake pedal free play.	✓	✓	✓	✓	✓	✓
		• Replace brake shoes.	Whenever worn to the limit					
8	* Brake hose	• Check for cracks or damage.		✓	✓	✓	✓	✓
		• Replace	Every 4 years					

PERIODIC MAINTENANCE AND MINOR REPAIR

NO	ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING (x 1000 km)					ANNUAL CHECK
			1	10	20	30	40	
9	* Wheels	• Check runout and for damage.		✓	✓	✓	✓	
10	* Tires	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		✓	✓	✓	✓	✓
11	* Wheel bearings	• Check bearing for looseness or damage.		✓	✓	✓	✓	
12	* Swingarm	• Check operation and for excessive play. • Lubricate with molybdenum disulfide grease.		✓	✓	✓	✓	
13	Drive chain	• Check chain slack, alignment and condition. • Adjust and lubricate chain with a special O-ring chain lubricant thoroughly.	Every 500 km and after washing the motorcycle or riding in the rain.					
14	* Steering bearings	• Check bearing play and steering for roughness. • Lubricate with lithium-soap-based grease.	✓	✓	✓	✓	✓	
15	* Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened.		✓	✓	✓	✓	✓
16	Sidestand	• Check operation. • Lubricate.		✓	✓	✓	✓	✓
17	* Sidestand switch	• Check operation.	✓	✓	✓	✓	✓	✓
18	* Front fork	• Check operation and for oil leakage.		✓	✓	✓	✓	
19	* Shock absorber assemblies	• Check operation and shock absorbers for oil leakage.		✓	✓	✓	✓	

PERIODIC MAINTENANCE AND MINOR REPAIR

NO	ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING (x 1000 km)					ANNUAL CHECK
			1	10	20	30	40	
20	* Rear suspension relay arm and connecting arm pivoting points	• Check operation.		✓	✓	✓	✓	
		• Lubricate with lithium-soap-based grease			✓		✓	
21	* Fuel injection	• Check engine idle speed.	✓	✓	✓	✓	✓	✓
22	Engine oil	• Change • Check oil level and vehicle for oil leakage.	✓	✓	✓	✓	✓	✓
23	Engine oil filter element	• Replace.	✓		✓		✓	
24	* Front and rear brake switches	• Check operation.	✓	✓	✓	✓	✓	✓
25	Moving parts and cables	• Lubricate.		✓	✓	✓	✓	✓
26	* Throttle grip housing and cable	• Check operation and free play. • Adjust the throttle cable free play if necessary. • Lubricate the throttle grip housing and cable.		✓	✓	✓	✓	✓
27	* Air induction system	• Check the air cut-off valve, reed valve, and hose for damage. • Replace any damaged parts if necessary.		✓	✓	✓	✓	✓
28	* Muffler and exhaust pipe	• Check the screw clamp for looseness.	✓	✓	✓	✓	✓	
29	* Lights, signals and switches	• Check operation. • Adjust headlight beam.	✓	✓	✓	✓	✓	✓

PERIODIC MAINTENANCE AND MINOR REPAIR

EAU18660

NOTE:

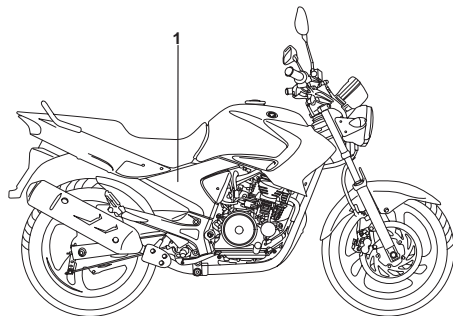
- The air filter needs more frequent service if you are riding in unusually wet or dusty areas.
 - Hydraulic brake service
 - Regularly check and, if necessary, correct the brake fluid level.
 - Every two years replace the internal components of the brake master cylinder and caliper, and change the brake fluid.
 - Replace the brake hoses every four years and if cracked or damaged.
-

PERIODIC MAINTENANCE AND MINOR REPAIR

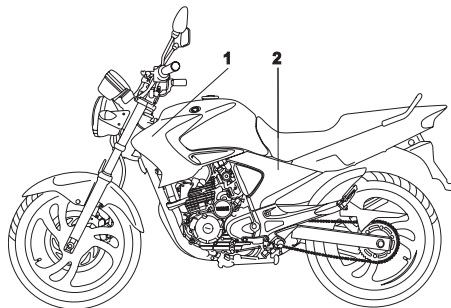
EAU18721

Removing and installing the cowling and panels

The cowling and panels shown need to be removed to perform some of the maintenance jobs described in this chapter. Refer to this section each time the cowling or a panel needs to be removed and installed.



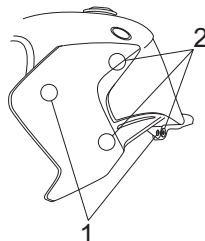
1. Panel B



1. Cowling
2. Panel A

Cowling

EAU19040

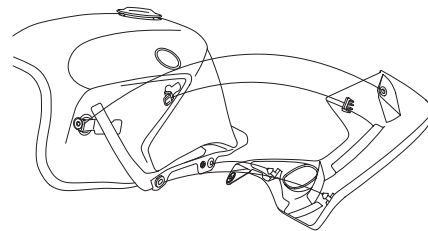


1. Screw
2. Quick fastener

To remove the cowling

1. Remove the seat and panel A. (See pages 3-9 and 6-6.)

2. Remove the screws, and then pull the cowling off as shown.



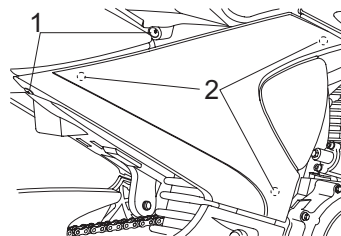
To install the cowling

1. Place the cowling in the original position, and then install the screws.
2. Install the panel and the seat.

EAUW0110

Panels A and B

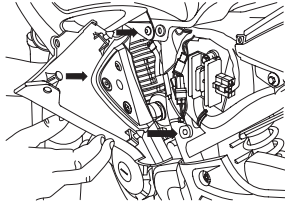
To remove one of the panels



1. Screw
2. Quick fastener

PERIODIC MAINTENANCE AND MINOR REPAIR

1. Remove the seat. (See page 3-9.)
2. Remove the screws, and then pull the panel to the outside as shown.



To install the panel

1. Place the panel in the original position, and install the screws.
2. Install the seat.

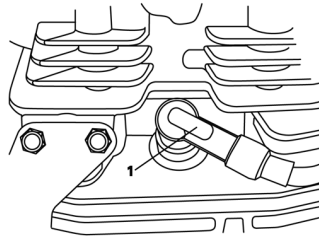
Checking the spark plug

EAU19630

- The spark plug is an important engine component, which is easy to check. Since heat and deposits will cause any spark plug to slowly erode, the spark plug should be removed and checked in accordance with the periodic maintenance and lubrication chart. In addition, the condition of the spark plug can reveal the condition of the engine.

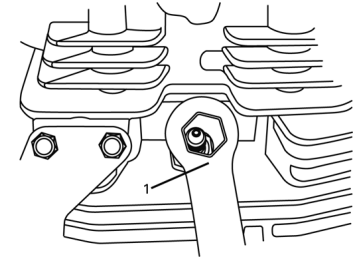
To remove the spark plug

1. Remove cowlings. (See page 6-6.)



1. Spark plug cap

2. Remove the spark plug cap.
3. Remove the spark plug as shown, with the spark plug wrench included in the owner's tool kit.



1. Spark plug wrench

To check the spark plug

1. Check that the porcelain insulator around the center electrode of the spark plug is a medium-to-light tan (the ideal color when the motorcycle is ridden normally).

NOTE:

If the spark plug shows a distinctly different color, the engine could be defective. Do not attempt to diagnose such problems yourself. Instead, have a Yamaha dealer check the motorcycle.

2. Check the spark plug for electrode erosion and excessive carbon or other deposits, and replace it if necessary.

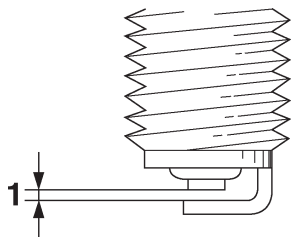
PERIODIC MAINTENANCE AND MINOR REPAIR

EAU37801

Specified spark plug:
NGK / DR8EA

To install the spark plug

1. Measure the spark plug gap with a wire thickness gauge and, if necessary, adjust the gap to specification.



1. Spark plug gap

Spark plug gap:
0.6~0.7mm (0.024-0.028 in)

2. Clean the surface of the spark plug gasket and its mating surface, and then wipe off any grime from the spark plug threads.
3. Install the spark plug with the spark plug wrench, and then tighten it to the specified torque.

Tightening torque:
Spark plug:
17.5 Nm (1.75 m.kgf, 13 ft.lbt)

NOTE: _____
If a torque wrench is not available when installing a spark plug, a good estimate of the correct torque is 1/4-1/2 turn past finger tight. However, the spark plug should be tightened to the specified torque as soon as possible.

4. Install the spark plug cap.
5. Install the cowl.

Engine oil and oil filter element

The engine oil level should be checked before each ride. In addition, the oil must be changed and the oil filter element replaced at the intervals specified in the General periodic maintenance and lubrication chart.

To check the engine oil level

1. Place the vehicle on a level surface and hold it in an upright position.

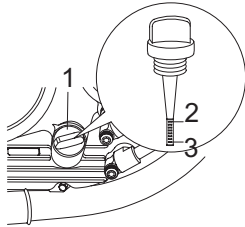
NOTE: _____
Make sure that the vehicle is positioned straight up when checking the oil level. A slight tilt to the side can result in a false reading.

2. Start the engine, warm it up for several minutes, and then turn it off.
3. Wait a few minutes until the oil settles, and then check the oil level through the check window located at the bottom-right side of the crankcase.

PERIODIC MAINTENANCE AND MINOR REPAIR

NOTE: _____

The engine oil should be between the minimum and maximum level marks.

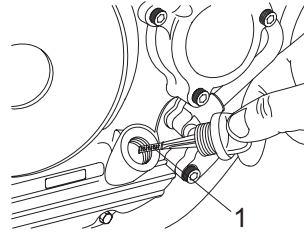


1. Engine oil filler cap
2. Maximum level mark
3. Minimum level mark

4. If the engine oil is below the minimum level mark, add sufficient oil of the recommended type to raise it to the correct level.

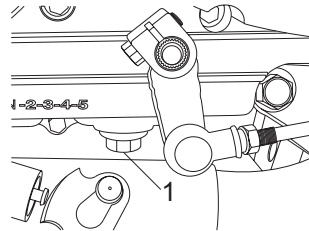
To change the engine oil (with or without oil filter element replacement)

1. Start the engine, warm it up for several minutes, and then turn it off.
2. Place an oil pan under the engine to collect the used oil.



1. Dipstick

3. Remove the engine oil filler bolt and drain bolt to drain the oil from the crankcase.



1. Engine oil drain bolt

NOTE: _____

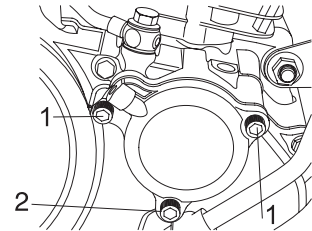
Check the washer for damage and replace it if necessary.

4. Remove the oil filter element drain bolt to drain the oil from the oil filter element.

NOTE: _____

Skip steps 5-7 if the oil filter element is not being replaced.

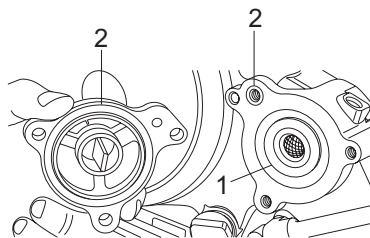
5. Remove the oil filter element cover by removing the bolts.



1. Oil filter element cover bolts
2. Oil filter element drain bolt

6. Remove and replace the oil filter element and O-rings.

PERIODIC MAINTENANCE AND MINOR REPAIR



- 1. Oil filter element
- 2. O-ring

NOTE: _____
Make sure that the O-rings are properly seated.

- 7. Install the oil filter element cover by installing the bolts, then tightening them to the specified torque.

Tightening torque:
Oil filter element cover bolt:
10 Nm (1,0 m.kgf, 7.4 ft.lbf)

- 8. Install the engine oil drain bolt, and then tighten it to the specified torque.
- 9. Install the oil filter element drain bolt, and then tighten it to the specified torque.

Tightening torque:
Engine oil drain bolt:
20 Nm (2.0 m.kgf, 15 ft.lbf)
Oil filter element drain bolt:
7 Nm (0.7 m.kgf, 5.25 ft.lbf)

- 10. Add the specified amount of the recommended engine oil, and then install and tighten the oil filler bolt.

Recommended engine oil:
See page 8-1
Oil quantity:
Without oil filter element replacement:
1.35 L (1.43 US qt) (1.19 Imp.qt)
With oil filter element replacement:
1.45 L (1.53 US qt) (1.28 Imp.qt)

ECA11620

CAUTION:

- In order to prevent clutch slippage (since the engine oil also lubricates the clutch), do not mix any chemical additives. Do not use oils with a diesel specification of “CD” or oils of a higher quality than specified. In

addition, do not use oils labeled “ENERGY CONSERVING II” or higher.

- Make sure that no foreign material enters the crankcase.

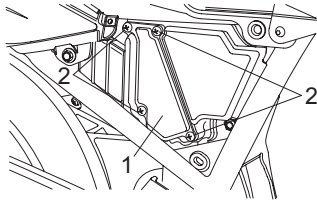
- 11. Start the engine, and then let it idle for several minutes while checking it for oil leakage. If oil is leaking, immediately turn the engine off and check for the cause.
- 12. Turn the engine off, and then check the oil level and correct it if necessary.

EAU20880

Cleaning the air filter element

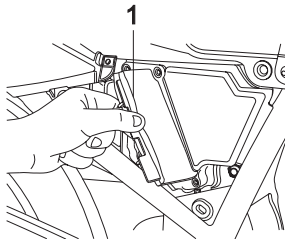
The air filter should be cleaned at the specified intervals. It should be cleaned more frequently when riding in unusually wet or dusty areas.

1. Remove panel B. (See page 6-6.)



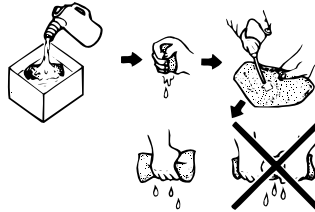
1. Air filter case cover
2. Screw

2. Remove the air filter case by removing the screws.
3. Remove the air filter from the case.



1. Air filter element

4. Remove the air filter element from its guide and clean it with solvent. After cleaning, remove the remaining solvent by squeezing the element.



5. Apply recommended oil to the entire surface of the element and squeeze out the excess oil. It should be wet but not dripping.

Recommended oil:
Engine oil

6. Insert the air filter element guide into the air filter and install it in the case.
7. Install the air filter case cover and panel by installing the screws.

CAUTION:

- Make sure that the air filter element is properly seated in the air filter case.
- The engine should never be operated without the air filter element installed, otherwise the piston(s) and/or cylinder(s) may become excessively worn.

PERIODIC MAINTENANCE AND MINOR REPAIR

EAU21311

Checking the engine idling speed

The engine idling speed must be checked as follow and, if necessary, adjusted by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

Start the engine and warm it up for several minutes at 1000-2000 r/min while occasionally revving it to 4000-5000 r/min.

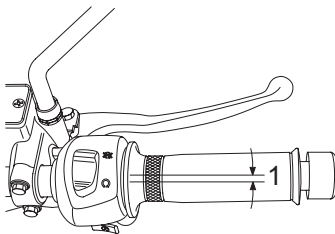
NOTE: _____

The engine is warm when it quickly responds to the throttle.

Engine idling speed:
1.300 - 1.500 r/min.

EAU21382

Checking the throttle cable free play



1. Throttle cable free play

The throttle cable free play should measure 3.0 - 5.0 mm (0.12 - 0.20 in) at the throttle grip. Periodically check the throttle cable free play and, if necessary, have a Yamaha dealer adjust it.

EAU21401

Valve clearance

- The valve clearance changes with use, resulting in improper air-fuel mixture and/or engine noise. To prevent this from occurring, the valve clearance must be adjusted by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

Tires

To maximize the performance, durability, and safe operation of your motorcycle, note the following points regarding the specified tires.

Tire air pressure

The tire air pressure should be checked and, if necessary, adjusted before each ride.

EAU21560

WARNING

- The tire air pressure must be checked and adjusted on cold tires (i.e., when the temperature of the tires equals the ambient temperature).
- The tire air pressure must be adjusted in accordance with the riding speed and with the total weight of rider, passenger, cargo, and accessories approved for this model.

EWA10500

Tire air pressure (measured on cold tires):

0 - 90 kg (0 - 198 lb):

Front:

225 kPa (33 psi) (2.25 kgf/cm²)

Rear:

250 kPa (36 psi) (2.50 kgf/cm²)

Loading condition:

90 - 167 kg (198 - 368 lb)

Front:

225 kPa (33 psi) (2.25 kgf/cm²)

Rear:

250 kPa (36 psi) (2.50 kgf/cm²)

Maximum load*:

167 kg (368 lb)

* Total weight of rider, passenger, cargo and accessories

EWA11020

WARNING

Because loading has an enormous impact on the handling, braking, performance and safety characteristics of your motorcycle, you should keep the following precautions in mind.

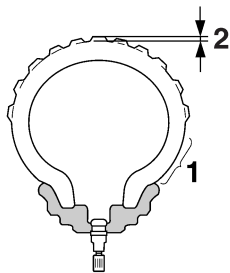
- **NEVER OVERLOAD THE MOTORCYCLE!** Operation of an overloaded motorcycle may result in tire damage, loss of

control, or severe injury. Make sure that the total weight of rider, passenger, cargo, and accessories does not exceed the specified maximum load for the vehicle.

- Do not carry along loosely packed items, which can shift during a ride.
- Securely pack the heaviest items close to the center of the motorcycle and distribute the weight evenly on both sides.
- Adjust the suspension and tire air pressure with regard to the load.
- Check the tire condition and air pressure before each ride.

PERIODIC MAINTENANCE AND MINOR REPAIR

Tire inspection



- 1. Tire sidewall
- 2. Tire tread depth

The tires must be checked before each ride. If the center tread depth reaches the specified limit, if the tire has a nail or glass fragments in it, or if the sidewall is cracked, have a Yamaha dealer replace the tire immediately.

Minimum tire tread depth (front and rear):
1.6 mm (0.06 in)

NOTE:

The tire tread depth limits may differ from country to country. Always comply with the local regulations.

Tire information

This motorcycle is equipped with cast wheels and tubeless tires.

EWA10460

WARNING

- The front and rear tires should be of the same make and design, otherwise the handling characteristics of the vehicle cannot be guaranteed.
After extensive tests, only the tires listed below have been approved for this model by Yamaha.

Front tire:

Size:

100/80-17M/C (52S)

Manufacturer/model:

PIRELLI / SPORT DEMON

Rear tire:

Size:

130/70-17M/C (62S)

Manufacturer/model:

PIRELLI / SPORT DEMON

WARNING

- Have a Yamaha dealer replace excessively worn tires. Besides being illegal, operating the vehicle with excessively worn tires decreases riding stability and can lead to loss of control.
- The replacement of all wheel and brake related parts, including the tires, should be left to a Yamaha dealer, who has the necessary professional knowledge and experience.

EWA10470

EAU21960

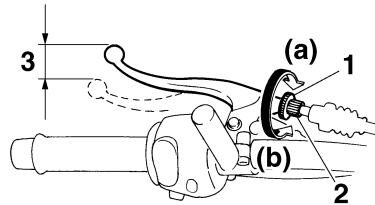
EAU22020

Cast wheels

To maximize the performance, durability, and safe operation of your motorcycle, note the following points regarding the specified wheels.

- The wheel rims should be checked for cracks, bends or warpage before each ride. If any damage is found, have a Yamaha dealer replace the wheel. Do not attempt even the smallest repair to the wheel. A deformed or cracked wheel must be replaced.
- The wheel should be balanced whenever either the tire or wheel has been changed or replaced. An unbalanced wheel can result in poor performance, adverse handling characteristics, and a shortened tire life.
- Ride at moderate speeds after changing a tire since the tire surface must first be “broken in” for it to develop its optimal characteristics.

Adjusting the clutch lever free play



1. Locknut
2. Clutch lever free play adjusting bolt
3. Clutch lever free play

The clutch lever free play should measure 10.0 - 15.0 mm (0.39 - 0.59 in) as shown. Periodically check the clutch lever free play and, if necessary, adjust it as follows.

1. Loosen the locknut at the clutch lever.
2. To increase the clutch lever free play, turn the adjusting bolt in direction (a). To decrease the clutch lever free play, turn the adjusting bolt in direction (b).
3. Tighten the locknut.

NOTE: _____

If the specified free play cannot be obtained as described above or if the clutch does not operate correctly, have a Yamaha dealer check the internal clutch mechanism.

PERIODIC MAINTENANCE AND MINOR REPAIR

Adjusting the brake pedal position and free play

EAU22192

EWA10670

⚠ WARNING

It is advisable to have a Yamaha dealer make these adjustments.

Brake pedal position

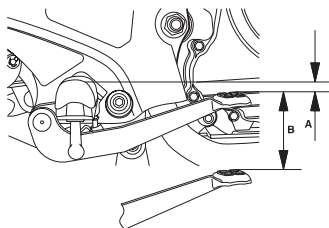
The top of the brake pedal should be positioned approximately 29 mm (1.14 in) below the top of the footrest. Periodically check the brake pedal position and, if necessary, adjust it as follows.

1. Loosen the locknut at the brake pedal.
2. To raise the brake pedal, turn the adjusting bolt in direction (a). To lower the brake pedal, turn the adjusting bolt in direction (b).
3. Tighten the locknut.

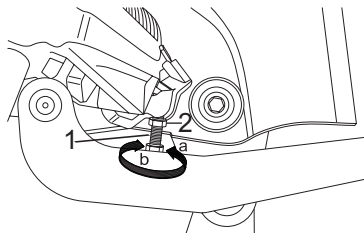
EWA11230

⚠ WARNING

After adjusting the brake pedal position, the brake pedal free play must be adjusted.



A. Pedal height
B. Brake pedal free play



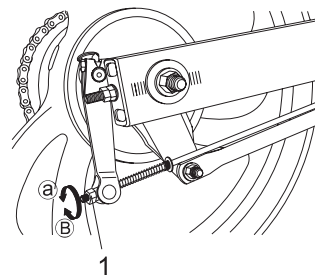
1. Adjusting bolt
2. Locknut

Brake pedal free play

The brake pedal free play should measure 15.0 - 20.0 mm (0.59 - 0.79 in) as shown. Periodically check the brake pedal free play and, if necessary, adjust it as follows.

To increase the brake pedal free play,

turn the adjusting nut at the brake rod in direction (a). To decrease the brake pedal free play, turn the adjusting nut in direction (b).



1. Adjusting nut

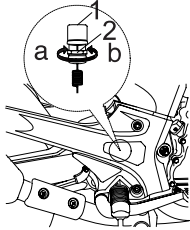
⚠ WARNING

- After adjusting the drive chain slack or removing and installing the rear wheel, always check the brake pedal free play.
- If proper adjustment cannot be obtained as described, have a Yamaha dealer make this adjustment.
- After adjusting the brake pedal free play, check the operation of the brake light.

EWA10680

Adjusting the rear brake light switch

EAU22270



1. Rear brake light switch
2. Rear brake light switch adjusting nut

The rear brake light switch, which is activated by the brake pedal, is properly adjusted when the brake light comes on just before braking takes effect. If necessary, adjust the brake light switch as follows.

Turn the adjusting nut while holding the rear brake light switch in place. To make the brake light come on earlier, turn the adjusting nut in direction (a). To make the brake light come on later, turn the adjusting nut in direction (b).

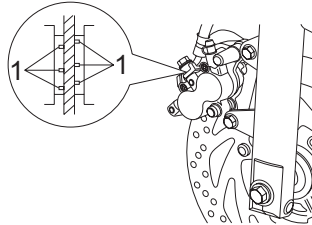
Checking the front brake pads and rear brake shoes

EAU22380

The front brake pads and the rear brake shoes must be checked for wear at the intervals specified in the periodic maintenance and lubrication chart.

Front brake pads

EAU22430

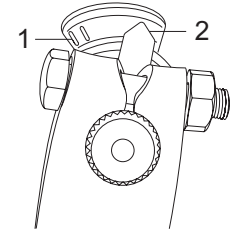


1. Brake pad wear indicator

Each front brake pad is provided with wear indicator grooves, which allow you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator grooves. If a brake pad has worn to the point that the wear indicator grooves have almost disappeared, have a Yamaha dealer replace the brake pads as a set.

Rear brake shoes

EAU22540



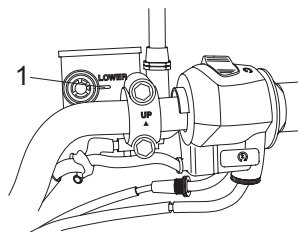
1. Wear limit line
2. Brake shoe wear indicator

The rear brake is provided with a wear indicator, which allows you to check the brake shoe wear without having to disassemble the brake. To check the brake shoe wear, check the position of the wear indicator while applying the brake. If a brake shoe has worn to the point that the wear indicator reaches the wear limit line, have a Yamaha dealer replace the brake shoes as a set.

PERIODIC MAINTENANCE AND MINOR REPAIR

Checking the front brake fluid level

EAU37001



1. Minimum level mark

Insufficient brake fluid may allow air to enter the brake system, possibly causing it to become ineffective.

Before riding, check that the brake fluid is above the minimum level mark and replenish if necessary. A low brake fluid level may indicate worn brake pads and/or brake system leakage. If the brake fluid level is low, be sure to check the brake pads for wear and the brake system for leakage.

Observe these precautions:

- When checking the fluid level, make sure that the top of the master cylinder is level by turning the handlebars.

- Use only the recommended quality brake fluid, otherwise the rubber seals may deteriorate, causing leakage and poor braking performance.

Recommended brake fluid:
DOT 4

NOTE: _____
If DOT 4 is not available, DOT 3 can be used.

- Refill with the same type of brake fluid. Mixing fluids may result in a harmful chemical reaction and lead to poor braking performance.
- Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.
- Brake fluid may deteriorate painted surfaces or plastic parts. Always clean up spilled fluid immediately.
- As the brake pads wear, it is normal for the brake fluid level to gradually go down. However, if the brake fluid level goes down suddenly, have a Yamaha dealer check the cause.

EAU22720

Changing the brake fluid

Have a Yamaha dealer change the brake fluid at the intervals specified in the NOTE after the periodic maintenance and lubrication chart. In addition, have the oil seals of the brake master cylinder and caliper as well as the brake hose replaced at the intervals listed below or whenever they are damaged or leaking.

- Oil seals: Replace every two years.
- Brake hose: Replace every four years.

PERIODIC MAINTENANCE AND MINOR REPAIR

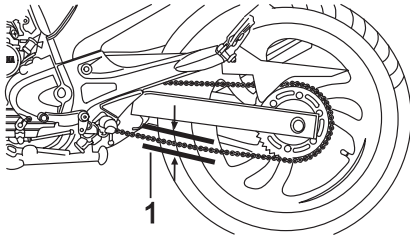
Drive chain slack

The drive chain slack should be checked before each ride and adjusted if necessary.

EAU22760

To check the drive chain slack

EAU22772



1. Drive chain slack

1. Place the motorcycle on the sidestand.

NOTE:

When checking and adjusting the drive chain slack, there should be no weight on the motorcycle.

2. Shift the transmission into the neutral position.
3. Move the rear wheel by pushing the motorcycle to locate the

tightest portion of the drive chain, and then measure the drive chain slack as shown.

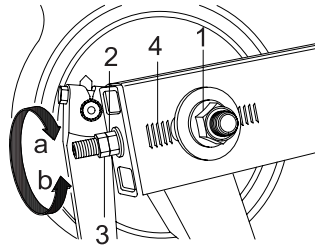
Drive chain slack:

25.0 - 35.0 mm (0.98 - 1.38 in)

4. If the drive chain slack is incorrect, adjust it as follows.

EAU22821

To adjust the drive chain slack



1. Axle nut
2. Drive chain slack adjusting nut
3. Locknut
4. Alignment marks

1. Loosen the brake pedal free play adjusting nut, axle nut, and locknut at each end of the swingarm.
2. To tighten the drive chain, turn the adjusting nut at each end of the

swingarm in direction (a). To loosen the drive chain, turn the adjusting nut at each end of the swingarm in direction (b), and then push the rear wheel forward.

NOTE:

Using the alignment marks on each side of the swingarm, make sure that both adjusting nuts are in the same position for proper wheel alignment.

ECA10570

CAUTION:

Improper drive chain slack will overload the engine as well as other vital parts of the motorcycle and can lead to chain slippage or breakage. To prevent this from occurring, keep the drive chain slack within the specified limits.

3. Tighten both locknuts and the axle nut to the specified torques.

PERIODIC MAINTENANCE AND MINOR REPAIR

Tightening torques:

Locknut:

16 Nm (1.6 m.kgf, 12 ft.lbt)

Axle nut:

104 Nm (10.4 m.kgf, 77 ft.lbt)

4. Adjust the brake pedal free play.
(See page 6-16.)

EWA10660

WARNING

After adjusting the brake pedal free play, check the operation of the brake light.

6

Cleaning and lubricating the drive chain

EAU23022

The drive chain must be cleaned and lubricated at the intervals specified in the periodic maintenance and lubrication chart, otherwise it will quickly wear out, especially when riding in dusty or wet areas. Service the drive chain as follows.

CAUTION:

The drive chain must be lubricated after washing the motorcycle and riding in the rain.

ECA10581

1. Clean the drive chain with kerosene and a small soft brush.

ECA11120

CAUTION:

To prevent damaging the O-rings, do not clean the drive chain with steam cleaners, high-pressure washers or inappropriate solvents.

2. Wipe the drive chain dry.
3. Thoroughly lubricate the drive

chain with a special O-ring chain lubricant.

ECA11110

CAUTION:

Do not use engine oil or any other lubricants for the drive chain, as they may contain substances that could damage the O-rings.

PERIODIC MAINTENANCE AND MINOR REPAIR

EAU23100

Checking and lubricating the cables

The operation of all control cables and the condition of the cables should be checked before each ride, and the cables and cable ends should be lubricated if necessary. If a cable is damaged or does not move smoothly, have a Yamaha dealer check or replace it.

Recommended lubricant:
Engine oil

EWA10720

⚠ WARNING

Damage to the outer sheath may interfere with proper cable operation and will cause the inner cable to rust. Replace a damaged cable as soon as possible to prevent unsafe conditions.

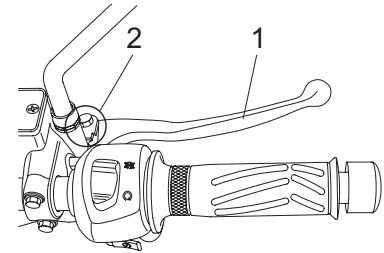
EAU23111

Checking and lubricating the throttle grip and cable

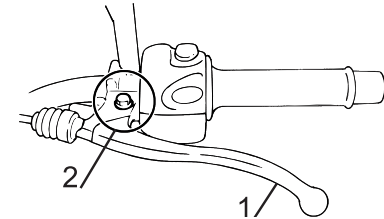
The operation of the throttle grip should be checked before each ride. In addition, the cable should be lubricated at the intervals specified in the periodic maintenance chart.

EAU23140

Checking and lubricating the brake and clutch levers



- 1. Brake lever
- 2. Lubrication point



- 1. Clutch lever
- 2. Lubrication point

The operation of the brake and clutch levers should be checked before each ride, and the lever pivots should be lubricated if necessary.

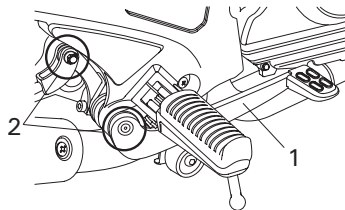
PERIODIC MAINTENANCE AND MINOR REPAIR

Recommended lubricant:

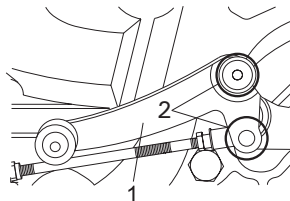
Lithium-soap-based grease (all-purpose grease)

Checking and lubricating the brake and shift pedals

EAU23131



1. Brake pedal
2. Lubrication points



1. Shift pedal
2. Lubrication points

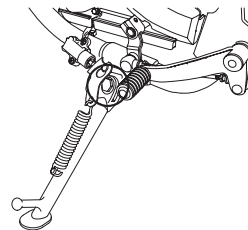
The operation of the brake and shift pedals should be checked before each ride, and the pedal pivots should be lubricated if necessary.

Recommended lubricant:

Lithium-soap-based grease (all-purpose grease)

Checking and lubricating the sidestand

EAU23200



The operation of the sidestand should be checked before each ride, and the sidestand pivot and metal-to-metal contact surfaces should be lubricated if necessary.

EWA10730

⚠ WARNING

If the sidestand does not move up and down smoothly, have a Yamaha dealer check or repair it.

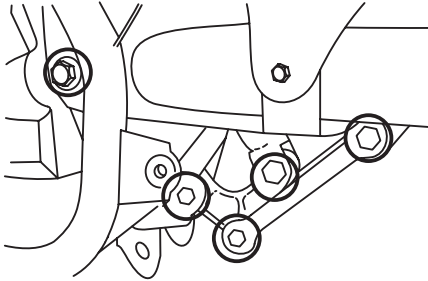
Recommended lubricant:

Lithium-soap-based grease (all-purpose grease)

PERIODIC MAINTENANCE AND MINOR REPAIR

Lubricating the rear suspension

EAU23250



The pivoting points of the rear suspension must be lubricated at the intervals specified in the periodic maintenance and lubrication chart.

Recommended lubricant:
Lithium-soap-based grease
(all-purpose grease)

Checking the front fork

EAU23271

The condition and operation of the front fork must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

To check the condition

EWA10750

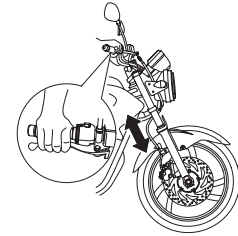
WARNING

Securely support the motorcycle so that there is no danger of it falling over.

Check the inner tubes for scratches, damage and excessive oil leakage.

To check the operation

1. Place the motorcycle on a level surface and hold it in an upright position.
2. While applying the front brake, push down hard on the handlebars several times to check if the front fork compresses and rebounds smoothly.



ECA10590

CAUTION:

If any damage is found or the front fork does not operate smoothly, have a Yamaha dealer check or repair it.

PERIODIC MAINTENANCE AND MINOR REPAIR

Checking the steering

EAU23280

Worn or loose steering bearings may cause danger. Therefore, the operation of the steering must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

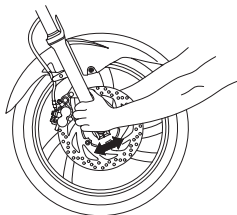
1. Place a stand under the engine to raise the front wheel off the ground.

EWA10750

⚠ WARNING

Securely support the motorcycle so that there is no danger of it falling over.

2. Hold the lower ends of the front fork legs and try to move them forward and backward. If any free play can be felt, have a Yamaha dealer check or repair the steering.



Checking the wheel bearings

EAU23290

The front and rear wheel bearings must be checked at the intervals specified in the periodic maintenance and lubrication chart. If there is play in the wheel hub or if the wheel does not turn smoothly, have a Yamaha dealer check the wheel bearings.

Battery

EAUW0100

The battery is located under the seat. (See page 3-9).

This model is equipped with a sealed type (MF) battery, which does not require any maintenance. There is no need to check the electrolyte or to add distilled water.

ECA10620

CAUTION:

Never attempt to remove the battery cell seals, as this would permanently damage the battery.

EWA10760

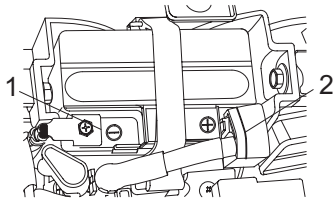
⚠ WARNING

- **Electrolyte is poisonous and dangerous since it contains sulfuric acid, which causes severe burns. Avoid any contact with skin, eyes or clothing and always shield your eyes when working near batteries. In case of contact, administer the following FIRST AID.**
 - **EXTERNAL:** Flush with plenty of water.
 - **INTERNAL:** Drink large

PERIODIC MAINTENANCE AND MINOR REPAIR

quantities of water or milk and immediately call a physician.

- **EYES:** Flush with water for 15 minutes and seek prompt medical attention.
- **Batteries produce explosive hydrogen gas. Therefore, keep sparks, flames, cigarettes, etc., away from the battery and provide sufficient ventilation when charging it in an enclosed space.**
- **KEEP THIS AND ALL BATTERIES OUT OF THE REACH OF CHILDREN.**



1. Negative battery lead
2. Positive battery lead

To charge the battery

Have a Yamaha dealer charge the battery as soon as possible, if it seems to have discharged. Keep in mind that the battery tends to discharge much quicker if the vehicle is equipped with optional electrical accessories.

To store the battery

1. If the motorcycle will not be used for more than one month, remove the battery, fully charge it, and then place it in a cool and dry place.
2. If the battery will be stored for more than two months, check it at least once a month and fully charge it if necessary.
3. Fully charge the battery before installation.
4. After installation, make sure that the battery leads are properly connected to the battery terminals.

ECA10630

CAUTION:

- **Always keep the battery charged. Storing a discharged battery can cause permanent battery damage.**
- **To charge a sealed-type (MF)**

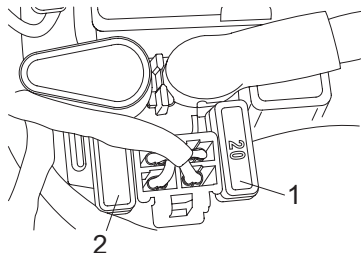
battery, a special (constant-voltage) battery charger is required. Using a conventional battery charger will damage the battery. If you do not have access to a sealed-type (MF) battery charger, have a Yamaha dealer charge your battery.

PERIODIC MAINTENANCE AND MINOR REPAIR

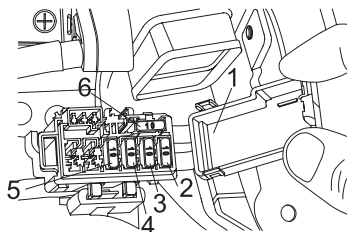
Replacing the fuses

EAU23624

The main fuse and the fuse box, which contains the fuses for the individual circuits, are located under the seat. (See page 3-9.)



- 6
1. Main fuse
 2. Spare fuse



1. Fuse box cover
2. Headlight fuse
3. Signaling system fuse
4. Fuel injection and ignition fuse
5. Display backup fuse
6. Spare fuse

If a fuse is blown, replace it as follows.

1. Turn the key to "OFF" and turn off the electrical circuit in question.
2. Remove the blown fuse, and then install a new fuse of the specified amperage.

Specified fuses:

Main fuse:

20.0 A

Headlight fuse:

10.0 A

Signaling system fuse:

10.0 A

Ignition and fuel injection fuse:

10.0 A

Backup fuse:

10.0 A

Spare fuses:

10.0 A and 20.0 A

ECA10640

CAUTION:

Do not use a fuse of a higher amperage rating than recommended to avoid causing extensive damage to the electrical system and possibly a fire.

3. Turn the key to "ON" and turn on the electrical circuit in question to

check if the device operates.

4. If the fuse immediately blows again, have a Yamaha dealer check the electrical system.

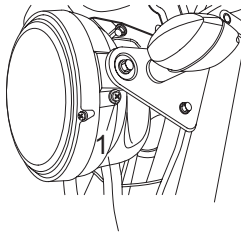
PERIODIC MAINTENANCE AND MINOR REPAIR

EAU23780

Replacing the headlight bulb

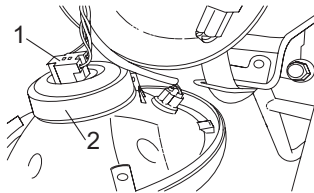
This model is equipped with a quartz bulb headlight. If the headlight bulb burns out, replace it as follows.

1. Remove the headlight unit by removing the screws.



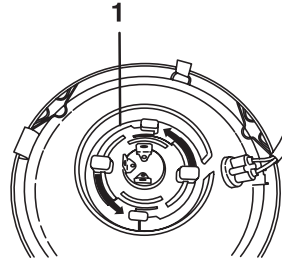
1. Screw

2. Disconnect the headlight coupler, and then remove the bulb cover.



1. Headlight coupler
2. Bulb cover

3. Remove the headlight bulb holder by turning it counterclockwise, and then remove the defective bulb.



1. Headlight bulb holder

EWA10790

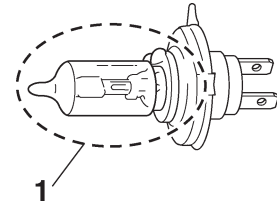
⚠ WARNING

Headlight bulbs get very hot. Therefore, keep flammable products away from a lit headlight bulb, and do not touch the bulb until it has cooled down.

4. Place a new headlight bulb into position, and then secure it with the bulb holder.

CAUTION:

Do not touch the glass part of the headlight bulb to keep it free from oil, otherwise the transparency of the glass, the luminosity of the bulb, and the bulb life will be adversely affected. Thoroughly clean off any dirt and fingerprints on the headlight bulb using a cloth moistened with alcohol or thinner.



1. Do not touch the glass part of the bulb

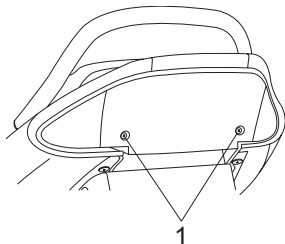
5. Install the headlight bulb cover, and then connect the coupler.
6. Install the headlight unit by installing the screws
7. Have a Yamaha dealer adjust the headlight beam if necessary.

PERIODIC MAINTENANCE AND MINOR REPAIR

Replacing a turn signal bulb or the tail/brake light bulb

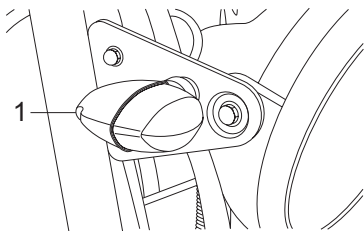
EAU24281

1. Remove the lens by removing the screws.



6

1. Screw



1. Screw

2. Remove the defective bulb by pushing it in and turning it counterclockwise.

3. Insert a new bulb into the socket, push it in, and then turn it clockwise until it stops.
4. Install the lens by installing the screws.

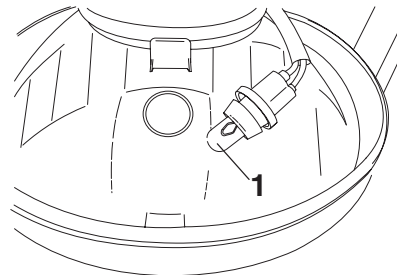
ECA10680

CAUTION:

Do not overtighten the screws, otherwise the lens may break.

Replacing the auxiliary light bulb

EAU37270



1. Auxiliary light bulb

If the auxiliary light bulb burns out, replace it as follows.

1. Remove the headlight unit by removing the screws.
2. Remove the socket (together with the bulb) by pulling it out.
3. Remove the defective bulb by pulling it out.
4. Insert a new bulb into the socket.
5. Install the socket (together with the bulb) by pushing it in.
6. Install the headlight unit by installing the screws.

PERIODIC MAINTENANCE AND MINOR REPAIR

EAU24350

Supporting the motorcycle

Since this model is not equipped with a centerstand, follow these precautions when removing the front and rear wheel or performing other maintenance requiring the motorcycle to stand upright. Check that the motorcycle is in a stable and level position before starting any maintenance. A strong wooden box can be placed under the engine for added stability.

To service the front wheel

1. Stabilize the rear of the motorcycle by using a motorcycle stand or, if an additional motorcycle stand is not available, by placing a jack under the frame in front of the rear wheel.
2. Raise the front wheel off the ground by using a motorcycle stand.

To service the rear wheel

Raise the rear wheel off the ground by using a motorcycle stand or, if a motorcycle stand is not available, by placing a jack either under each side of the frame in front of the rear wheel or under each side of the swingarm.

Front wheel

EAU24360

EAUW0180

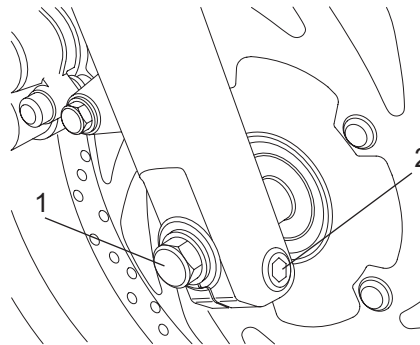
EWA10820

To remove the front wheel

! WARNING

- It is advisable to have a Yamaha dealer service the wheel.
- Securely support the motorcycle so that there is no danger of it falling over.

1. Loosen the front wheel axle pinch bolt and the wheel axle.



1. Wheel axle
2. Wheel axle pinch bolt

2. Lift the front wheel off the ground according to the procedure on page 6-29.
3. Pull the wheel axle out, and then remove the wheel.

ECA11070

CAUTION:

Do not apply the brake after the wheel has been removed together with the brake disc, otherwise the brake pads will be forced shut.

EAUW0160

To install the front wheel

1. Lift the wheel up between the fork legs.

NOTE:

Make sure that there is enough space between the brake pads before inserting the brake disc into the caliper.

2. Insert the wheel axle.
3. Lower the front wheel so that it is on the ground.
4. Tighten the wheel axle to the specified torque.

PERIODIC MAINTENANCE AND MINOR REPAIR

Tightening torque:

Wheel axle:

60 Nm (6.0 m.kgf, 44 ft.lbt)

5. Tighten the front fork pinch bolt to the specified torque.

Tightening torque:

Front fork pinch bolt:

55 Nm (5.5 m.kgf, 40ft.lbt)

6. Push down hard on the handlebar several times to check for proper fork operation.

Rear wheel

EAU25080

To remove the rear wheel

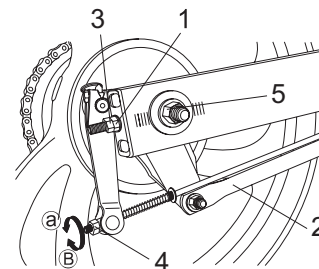
EAU25430

EWA10820

⚠ WARNING

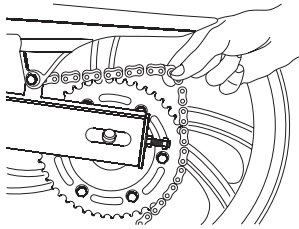
- It is advisable to have a Yamaha dealer service the wheel.
- Securely support the motorcycle so that there is no danger of it falling over.

1. Loosen the axle nut and the brake torque rod nut at the brake shoe plate.
2. Lift the rear wheel off the ground according to the procedure on page 6-29.
3. Disconnect the brake torque rod from the brake shoe plate by removing the nut and the bolt.



1. Drive chain slack adjusting nut
2. Brake torque rod
3. Locknut
4. Brake pedal free play adjusting nut
5. Axle nut

4. Remove the brake pedal free play adjusting nut, and then disconnect the brake rod at the brake camshaft lever.
5. Loosen the locknut and the drive chain adjusting nut on both ends of the swingarm.
6. Remove the axle nut, and then pull the wheel axle out.



7. Push the wheel forward, and then remove the drive chain from the rear sprocket.

NOTE: _____

The drive chain does not need to be disassembled in order to remove and install the wheel.

8. Remove the wheel.

EAUW0170

To install the rear wheel

1. Insert the wheel axle from the left-hand side, and then install the drive chain onto the rear sprocket.
2. Install the axle nut.
3. Install the brake rod onto the brake camshaft lever, and then install the brake pedal free play adjusting nut.

4. Connect the brake torque rod to the brake shoe plate by installing the bolt and the nut, and then tighten the nut to the specified torque.

Tightening torque:

Brake torque rod nut:
49 Nm (4.9 m.kgf, 36 ft.lbt)

5. Adjust the drive chain slack. (See page 6-19.)
6. Lower the rear wheel so that it is on the ground.
7. Tighten the axle nut to the specified torque.

Tightening torque:

Axle nut:
104 Nm (10.4 m.kgf, 77 ft.lbt)

8. Adjust the brake pedal position and free play. (See page 6-16)

EWA10660

⚠ WARNING

After adjusting the brake pedal free play, check the operation of the brake light.

Troubleshooting

Although Yamaha motorcycles receive a thorough inspection before shipment from the factory, trouble may occur during operation. Any problem in the fuel, compression, or ignition systems, for example, can cause poor starting and loss of power.

The following troubleshooting chart represents a quick and easy procedure for checking these vital systems yourself. However, should your motorcycle require any repair, take it to a Yamaha dealer, whose skilled technicians have the necessary tools, experience, and know-how to service the motorcycle properly.

Use only genuine Yamaha replacement parts. Imitation parts may look like Yamaha parts, but they are often inferior, have a shorter service life and can lead to expensive repair bills.

PERIODIC MAINTENANCE AND MINOR REPAIR

Troubleshooting chart

EAU25901

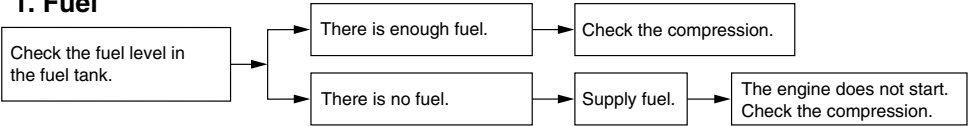
EWA10840



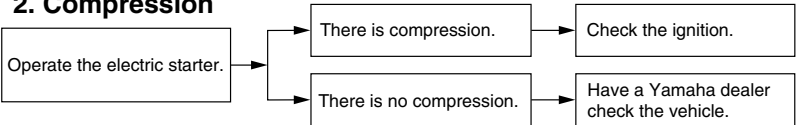
WARNING

Keep away from open flames and do not smoke while checking or working on the fuel system.

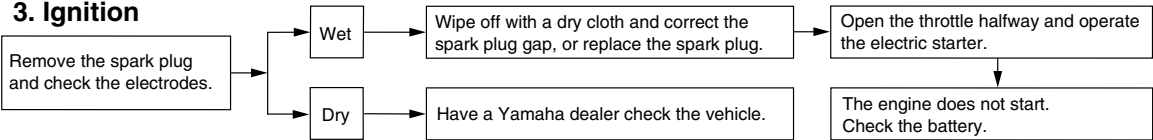
1. Fuel



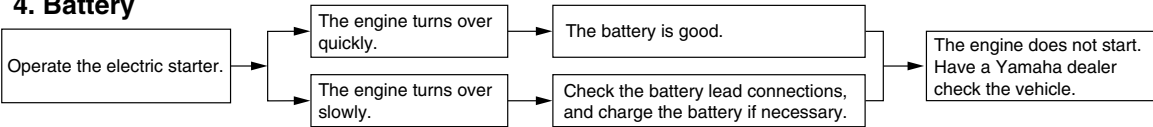
2. Compression



3. Ignition



4. Battery



EAU26001

Care

While the open design of a motorcycle reveals the attractiveness of the technology, it also makes it more vulnerable. Rust and corrosion can develop even if high-quality components are used. A rusty exhaust pipe may go unnoticed on a car, however, it detracts from the overall appearance of a motorcycle. Frequent and proper care does not only comply with the terms of the warranty, but it will also keep your motorcycle looking good, extend its life and optimize its performance.

Before cleaning

1. Cover the muffler outlet with a plastic bag after the engine has cooled down.
2. Make sure that all caps and covers as well as all electrical couplers and connectors, including the spark plug cap, are tightly installed.
3. Remove extremely stubborn dirt, like oil burnt onto the crankcase, with a degreasing agent and a brush, but never apply such products onto seals, gaskets,

sprockets, the drive chain and wheel axles. Always rinse the dirt and degreaser off with water.

Cleaning

ECA10770

CAUTION:

- **Avoid using strong acidic wheel cleaners, especially on spoked wheels. If such products are used on hard-to-remove dirt, do not leave the cleaner on the affected area any longer than instructed. Also, thoroughly rinse the area off with water, immediately dry it, and then apply a corrosion protection spray.**
- **Improper cleaning can damage windshields, cowlings, panels and other plastic parts. Use only a soft, clean cloth or sponge with mild detergent and water to clean plastic.**
- **Do not use any harsh chemical products on plastic parts. Be sure to avoid using cloths or sponges which have been in contact with strong or abrasive cleaning products, solvent or**

thinner, fuel (gasoline), rust removers or inhibitors, brake fluid, antifreeze or electrolyte.

- **Do not use high-pressure washers or steam-jet cleaners since they cause water seepage and deterioration in the following areas: seals (of wheel and swingarm bearings, fork and brakes), electric components (couplers, connectors, instruments, switches and lights), breather hoses and vents.**
- **For motorcycles equipped with a windshield: Do not use strong cleaners or hard sponges as they will cause dulling or scratching. Some cleaning compounds for plastic may leave scratches on the windshield. Test the product on a small hidden part of the windshield to make sure that it does not leave any marks. If the windshield is scratched, use a quality plastic polishing compound after washing.**

MOTORCYCLE CARE AND STORAGE

After normal use

Remove dirt with warm water, a mild detergent, and a soft, clean sponge, and then rinse thoroughly with clean water. Use a toothbrush or bottlebrush for hard-to-reach areas. Stubborn dirt and insects will come off more easily if the area is covered with a wet cloth for a few minutes before cleaning.

After riding in the rain, near the sea or on salt-sprayed roads

Since sea salt or salt sprayed on roads during winter are extremely corrosive in combination with water, carry out the following steps after each ride in the rain, near the sea or on salt-sprayed roads.

NOTE: _____

Salt sprayed on roads in the winter may remain well into spring.

1. Clean the motorcycle with cold water and a mild detergent, after the engine has cooled down.

ECA10790

CAUTION: _____

Do not use warm water since it increases the corrosive action of the salt.

2. Apply a corrosion protection spray on all metal, including chrome- and nickel-plated, surfaces to prevent corrosion.

After cleaning

1. Dry the motorcycle with a chamois or an absorbing cloth.
2. Immediately dry the drive chain and lubricate it to prevent it from rusting.
3. Use a chrome polish to shine chrome, aluminum and stainless-steel parts, including the exhaust system. (Even the thermally induced discoloring of stainless-steel exhaust systems can be removed through polishing.)
4. To prevent corrosion, it is recommended to apply a corrosion protection spray on all metal, including chrome- and nickel-plated, surfaces.

5. Use spray oil as a universal cleaner to remove any remaining dirt.
6. Touch up minor paint damage caused by stones, etc.
7. Wax all painted surfaces.
8. Let the motorcycle dry completely before storing or covering it.

EWA11130

! WARNING _____

- **Make sure that there is no oil or wax on the brakes or tires. If necessary, clean the brake discs and brake linings with a regular brake disc cleaner or acetone, and wash the tires with warm water and a mild detergent. Before riding at higher speeds, test the motorcycle's braking performance and cornering behavior.**

ECA10800

CAUTION: _____

- **Apply spray oil and wax sparingly and make sure to wipe off any excess.**
- **Never apply oil or wax to any**

MOTORCYCLE CARE AND STORAGE

rubber and plastic parts, but treat them with a suitable care product.

- **Avoid using abrasive polishing compounds as they will wear away the paint.**

NOTE: _____

Consult a Yamaha dealer for advice on what products to use.

Storage Short-term

Always store your motorcycle in a cool, dry place and, if necessary, protect it against dust with a porous cover.

EAUM1900

ECA10810

CAUTION:

- **Storing the motorcycle in a poorly ventilated room or covering it with a tarp, while it is still wet, will allow water and humidity to seep in and cause rust.**
- **To prevent corrosion, avoid damp cellars, stables (because of the presence of ammonia) and areas where strong chemicals are stored.**

Long-term

Before storing your motorcycle for several months:

1. Follow all the instructions in the “Care” section of this chapter.
2. Fill up the fuel tank and add fuel stabilizer (if available) to prevent the fuel tank from rusting and the fuel from deteriorating.

3. Perform the following steps to protect the cylinder, piston rings, etc. from corrosion.

- a. Remove the spark plug cap and spark plug.
- b. Pour a teaspoonful of engine oil into the spark plug bore.
- c. Install the spark plug cap onto the spark plug, and then place the spark plug on the cylinder head so that the electrodes are grounded. (This will limit sparking during the next step.)
- d. Turn the engine over several times with the starter. (This will coat the cylinder wall with oil.)
- e. Remove the spark plug cap from the spark plug, and then install the spark plug and the spark plug cap.

EWA10950

WARNING

To prevent damage or injury from sparking, make sure to ground the spark plug electrodes while turning the engine over.

4. Lubricate all control cables and the pivoting points of all levers and

MOTORCYCLE CARE AND STORAGE

pedals as well as of the sidestand/centerstand.

5. Check and, if necessary, correct the tire air pressure, and then lift the motorcycle so that both of its wheels are off the ground. Alternatively, turn the wheels a little every month in order to prevent the tires from becoming degraded in one spot.
6. Cover the muffler outlets with plastic bags to prevent moisture from entering them.
7. Remove the battery and fully charge it. Store it in a cool, dry place and charge it once a month. Do not store the battery in an excessively cold or warm place [less than 0 °C (30 °F) or more than 30 °C (90 °F)]. For more information on storing the battery, see page 6-25~6-26.

NOTE: _____

Make any necessary repairs before storing the motorcycle.

Dimensions:

Overall length:
2025 mm (79.7 in)
Overall width:
745 mm (29.3 in)
Overall height:
1065 mm (41.9 in)
Seat height:
805 mm (31.7 in)
Wheelbase:
1360 mm (53.5 in)
Ground clearance:
190 mm (7.5 in)
Minimum turning radius:
2395 mm (94.3 in)

Weight:

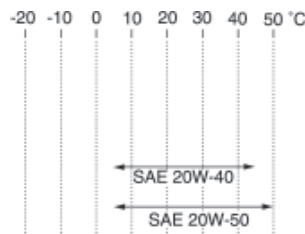
With oil and fuel:
154.0 kg (339 lb)

Engine:

Engine type:
Air cooled 4-stroke, SOHC
Cylinder arrangement:
Forward-inclined single cylinder
Displacement:
249.0 cm³ (15.2 cu.in)
Bore x stroke:
74.0 x 58.0 mm (2.91 x 2.28 in)
Compression ratio:
9.80:1
Starting system:
Electric starter
Lubrication system:
Wet sump

Engine oil:

Type:
SAE20W40 or SAE20W50



Recommended engine oil grade:
API service SF, SG type or higher

Engine oil quantity:
Without oil filter element replacement
1.35 L (1.43 US qt) (1.19 imp. qt)
With oil filter element replacement
1.45 L (1.53 US qt) (1.28 imp. qt)

Air filter:

Air filter element:
Wet element

Fuel:

Recommended fuel:
Regular unleaded gasoline only
Fuel tank capacity:
19.2 L (5.07 US gal) (4.22 imp. gal)
Fuel reserve amount:
4.5 L (1.19 US gal) (1.00 imp. gal)

Fuel injection:

Manufacturer:
AISAN
Model/quantity:
1100-87F70/1

Spark plug:

Manufacturer/model:
NGK/DR8EA
Spark plug gap:
0.6-0.7 mm (0.024 - 0.028 in)

Clutch:

Clutch type:
Wet, multiple-disc

Transmission:

Primary reduction system:
Spur gear
Primary reduction ratio:
74/24 (3.083)
Secondary reduction system:
Chain drive
Secondary reduction ratio:
44/15 (2.933)
Transmission type:
Constant mesh 5-speed
Operation:
Left foot operation
Gear ratio:
1st:
36/14 (2.571)
2nd:
32/19 (1.684)
3rd:

SPECIFICATIONS

28/22 (1.273)
4th:
26/25 (1.040)
5th:
23/27 (0.852)

Chassis:

Frame type:
Double cradle
Caster angle:
26.50 °
Trail:
104.5 mm (4.11 in)

Front tire:

Type:
Tubeless
Size:
100/80-17M/C (52S)
Manufacturer/model:
PIRELLI/SPORT DEMON

Rear tire:

Type:
Tubeless
Size:
130/70-17M/C (62S)
Manufacturer/model:
PIRELLI/SPORT DEMON

Loading:

Maximum load:
167 kg (368 b)
(Total weight of rider, passenger, cargo
and accessories)

Tire air pressure (measured on cold tires):

Loading condition:
0-90 kg (0-198 lb)
Front:
225 kPa (33 psi) (2.25 kgf/cm²)
Rear:
250 kPa (36 psi) (2.50 kgf/cm²)
Loading condition:
90-167 kg (198-368 lb)
Front:
225 kPa (33 psi) (2.25 kgf/cm²)
Rear:
250 kPa (36 psi) (2.50 kgf/cm²)

Front wheel:

Wheel type:
Cast wheel
Rim size:
17M/C x MT2.15

Rear wheel:

Wheel type:
Cast wheel
Rim size:
17M/C x MT3.00

Front brake:

Type:
Single disc brake
Operation:
Right hand operation
Recommended fluid:
DOT 3 or 4

Rear brake:

Type:
Leading, trailing drum brake
Operation:
Right foot operation
Recommended fluid:
DOT 3 or 4

Front suspension:

Type:
Telescopic fork
Spring/shock absorber type:
Coil spring/oil damper
Wheel travel:
120.0 mm (4.72 in)

Rear suspension:

Type:
Swingarm (link suspension)
Spring/shock absorber type:
Coil spring/oil damper
Wheel travel:
120.0 mm (4.72 in)

Electrical system:

Ignition system:
Transistorized coil ignition (digital)
Charging system:
AC magneto

Battery:

Model:
YTX77L-BS
Voltage, capacity:
12 V, 6.0 Ah

Headlight:

Bulb type:

Halogen bulb

Backup fuse:

10.0 A

Spare fuses:

10.0 A and 20.0 A

Bulb voltage, wattage x quantity

Headlight:

12 V, 35 W/35.0 W x 1

Tail brake light:

12 V, 5.0 W/21.0 W x 1

Front turn signal light:

12 V, 10.0 W x 2

Rear turn signal light:

12 V, 10.0 W x 2

Position light:

12 V, 5.0 W

Meter lighting:

14 V, 2.0 W x 2

Neutral indicator light:

14 V, 1.4 W x 1

Turn signal indicator light:

14 V, 1.4 W x 2

High beam indicator light:

14 V, 1.4 W x 1

Engine trouble warning light:

LED

Fuses:

Main fuse:

20.0 A

Headlight fuse:

10.0 A

Signaling system fuse:

10.0 A

Ignition and fuel injection fuse:

10.0 A

CONSUMER INFORMATION

Identification numbers

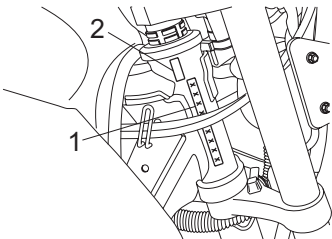
Record the key identification number, vehicle identification number and model label information in the spaces provided below for assistance when ordering spare parts from a Yamaha dealer or for reference in case the vehicle is stolen.

VEHICLE IDENTIFICATION NUMBER:

MODEL LABEL INFORMATION:

EAU26351

Vehicle identification number



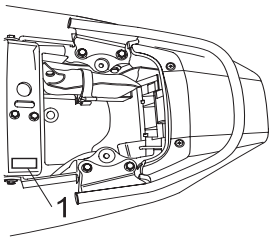
- 1. Vehicle identification number
- 2. Model year

The vehicle identification number is stamped into the steering head pipe. Record this number in the space provided.

NOTE: _____
The vehicle identification number is used to identify your motorcycle and may be used to register your motorcycle with the licensing authority in your area.

EAU26400

Model label



- 1. Model label

The model label is affixed to the frame under the passenger seat. (See page 3-9.) Record the information on this label in the space provided. This information will be needed when ordering spare parts from a Yamaha dealer.

EAU33941



PRINTED IN BRAZIL
2007 - GYL
(E)